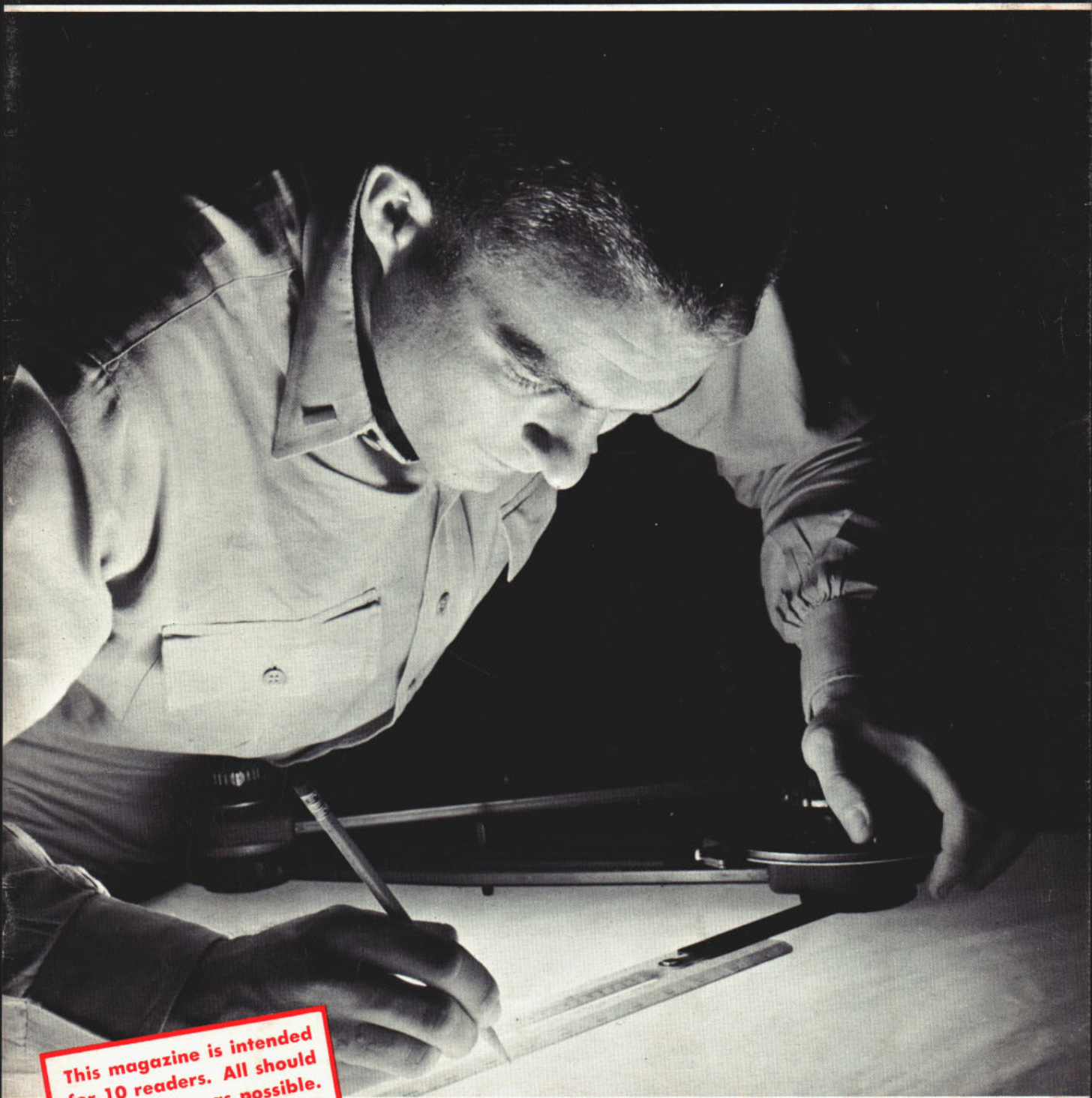


ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN



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for 10 readers. All should
see it as soon as possible.
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JANUARY 1963



ALL HANDS

THE BUREAU OF NAVAL PERSONNEL INFORMATION BULLETIN

JANUARY 1963 Nav-Pers-O NUMBER 552

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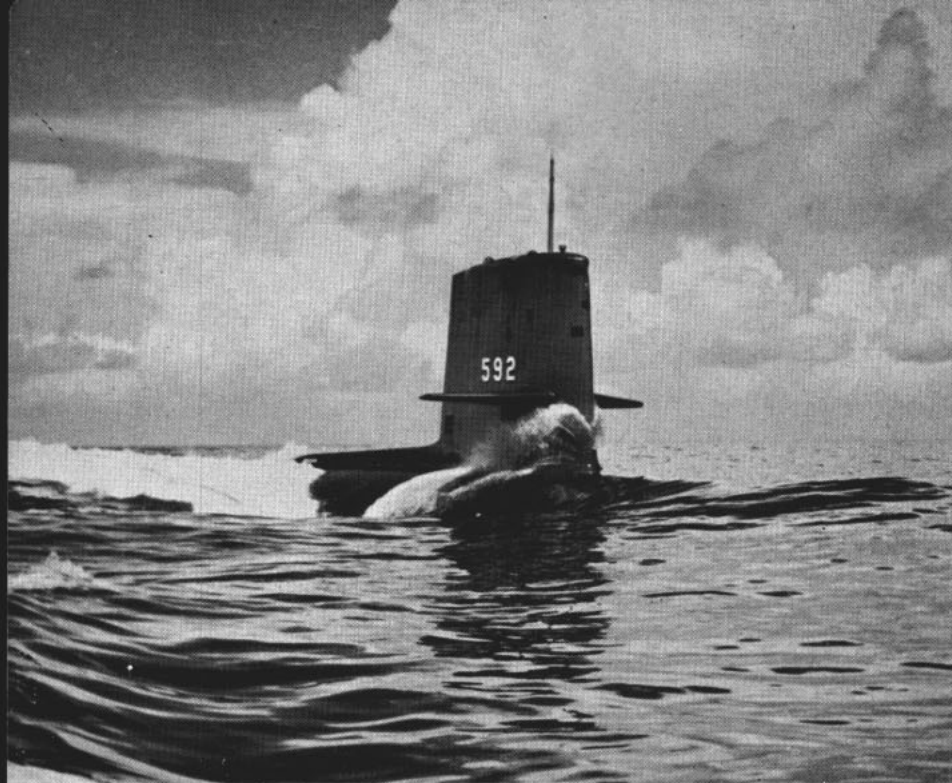
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• **FRONT COVER: ZEROING IN** — Navigation officer on board destroyer *USS Ozbourne* (DD 846) plots the course of his greyhound as it closes in on an 'enemy' submarine during ASW exercises in Pacific waters.

• **AT LEFT: NAPLES NIGHT** — Time exposure captures the harbor lights at Naples, Italy, and Mount Vesuvius in the background, while Sixth Fleet ships display their lights in the harbor. At right is nuclear-powered carrier *USS Enterprise* (CVAN 65).

• **CREDIT:** All photographs published in *ALL HANDS* are official Department of Defense photos unless otherwise designated.



FIRST OF ALL, of course, you must be a submariner. There are three basic programs that produce men qualified for duty on board FBM submarines. They are the Nuclear Power Program, the *Polaris* Program, and the conventional submarine school program.

Here are the ratings from which applications for submarine training are desired:

- SO, TM, ET, FT, and MT in pay grades E-4, E-5, E-6 and E-7 and designated strikers.

- MM, EN, EM, IC, QM, RM, YN, CS, SK and SD in pay grades E-4, E-5, E-6 and identified strikers of these ratings.

- HM, in pay grades E-5, E-6 and E-7.

- SN, SA, FN, TN and TA.

Because the Submarine Forces are growing rapidly, greater numbers of men in all of the above ratings and rates are needed for initial submarine training. MMs should request sub

How to Become a Nuclear

REMEMBER THE PARABLE of the seven blind men who discovered an elephant? Because they could not see the strange new animal in its entirety, each visualized it in terms of the one portion he could explore with his hands. The results were deplorable, to say the least.

A similar problem exists in attempting to see the nuclear submarine program of the Navy as a whole—it also is a strange new animal in our midst. Many men are interested but don't know just what it is, don't know if they can qualify, or if it would be to their advantage to make the attempt.

One point to consider when evaluating the consequences or the potentialities of the nuclear program upon your career—it's a wildly expanding field. At the present time, there are approximately 14,000 men in the combined submarine forces. Included in these forces are 11 FBM and 16 attack nuclear subs now in commission. As stated in the November issue of *ALL HANDS*, six SSBNs, eight SSNs and one DLGN have been authorized for fiscal year 1963. Within two to three years, the *Polaris* program itself will require some 10,000 men. The FBM repair ships *Proteus* and *Hunley* are on station, with more to follow.

ONE ASPECT of the nuclear elephant—to coin a phrase—is frequently overlooked by those considering the nuclear Navy as a career. Nearly a third of the billets in FBM subs are general service billets with little or no connection with nuclear power or the *Polaris* weapon system.

Here, for example, is the rating structure of one crew of an *Ethan Allen* class FBM sub:

GENERAL SERVICE	NUCLEAR POWER	POLARIS
3 SO	3 ET	4 QM
2 FT	15 MM	7 TM
4 RM	4 EN	5 FT
2 YN	9 EM	7 MT
1 SK	5 IC	12 ET
3 CS	36	35
5 SN		
5 FN		
1 HM		
3 SD		
29		

All this means a radical change in the occupations of many Navymen. The field is wide open for those who can—and will—qualify. It's more than probable that you may be eligible to participate in one of the most exciting developments in history.

Let's assume that you want to become a member of a typical crew in one of the Navy's FBM subs and see what your duty is like and what qualifications you must meet.

training only if interested in going on to nuclear power training.

If you are afloat on Seavey and have not received orders, you may apply for basic sub school. If accepted, you will be ordered to sub school provided you have not yet received orders to shore duty.

With the exception of sub school candidates ordered direct from Class "A" schools and recruit training, it is preferable that men normally serve in their present duty (sea or shore) for one year before they are ordered to submarine school.

MEN NOW ASHORE including those on Shorvey who have not received orders may apply for enlisted basic sub school by requesting orders direct to sub school. If you are assigned to shore duty, you must serve at least 12 months of your shore tour before you can expect detachment to sub school. This is not to say that you may not apply before your completion of the year ashore. On the contrary, it is preferable for all concerned that your applications are submitted as early as possible to permit ordering reliefs.

Here are the eligibility requirements to Basic Submarine Training:

- Have 24 months' obligated service commencing with the convening

date of the class to which ordered.

- Be a volunteer for sea duty in submarines.

- For those in other than ET, MM, EN, EM and IC ratings: Have a minimum combined ARI and MAT or ARI and MECCH score of 100, or a minimum combined GCT and ARI score of 100. For those in ET, MM, EN, EM and IC ratings, you must have a minimum combined GCT and ARI of 110. (This requirement is the same as that in effect for nuclear power training.)

- Men in the ET, MM, EN, EM and IC ratings must be high school graduates or have a GED equivalent.

- Be physically qualified for submarine duty in accordance with *BuMed Manual*, Article 15-29.

- Have demonstrated evidence of emotional and mental stability and maturity. The absence of these qualities is often disclosed by a poor service record.

- Be no more than 30 years of age.

Navyman

Waivers will be considered if you are in other than source ratings for nuclear power training.

IF YOU MEET these requirements, you may submit your request on the Enlisted Evaluation Report (NavPers 1339) via your commanding officer direct to the Chief of Naval Personnel (Attn: Pers B-2131). You must indicate your willingness to extend your enlistment or to reenlist, if necessary, to have the required obligated service.

If accepted, you will be ordered to the U. S. Naval Submarine School, New London, Conn., for an eight-week basic course of instruction. Unless you hold a rating of MT, YN, CS, SK, HM or SD, you should expect additional training when you have completed the basic course. Approximately 60 per cent of those eligible receive additional training. Therefore, if you are eligible for extra training, you should be prepared to spend at least 13 weeks at sub school.

Your orders will read for "temporary duty under instruction and further assignment by BuPers (Pers B2115) to duty in submarines in the Atlantic or Pacific Fleet."

During your seventh week at the Naval Submarine School, you will receive your orders for duty.

JANUARY 1963



POLARIS PUSHERS — Crew members of USS *George Washington* (SSBN 598) (above and below) check out equipment used in firing a Polaris.

ALL THIS IS, of course, merely the preliminary. Your ultimate goal is assignment to a nuclear ship and that's what you're going to get. As FBM subs have the greatest construction priority for the next few years, we'll discuss here the means by which you become an FBM submariner.

If you are an MM or EN, you have

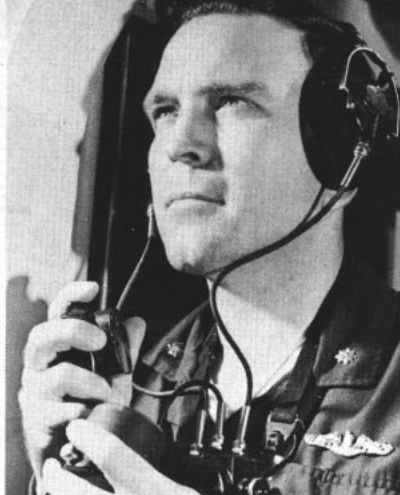
an excellent chance of going directly to nuclear power training from sub school.

However, most basic sub school graduates are ordered to duty either in conventional submarines, or to a non-nuclear billet in a nuclear submarine. If you are in this category, you should become a qualified submariner about six months after re-





Thomas L. Atchison, TM1(SS), USN



LCDR Patrick J. Hannifin, USN



Tudor F. Davis, TMC(SS), USN

POLARIS PATROLMEN — Members of Blue Crew man stations on patrol far below the surface of the sea.

porting aboard. Once qualified, you may (depending on your rating) submit your request for Nuclear Power or *Polaris* training.

The majority of men now being ordered to FBM submarines are already members of the submarine service. If you are now a submariner, serving in either a conventional or nuclear-powered submarine, you should submit your request for FBM submarine duty to either the COMSUBPACREP at EPDOPAC or the COMSUBLANTREP at EPDOLANT.

If you are eligible for duty in an FBM sub, your name will be placed on a waiting list at one of those two locations. You will then be ordered to a new construction submarine approximately 10 months in advance of its tentative commissioning date, or you may be ordered to an operating FBM sub as a replacement.

Source ratings for FBM submarines are: TM, QM, FT, MT, ET, SO, RM, MM, EN, EM, IC, YN, SK, CS, SD, FN and SN. Although there may not be billets in all pay grades, men in all pay grades are encouraged to apply should substitutions be necessary.

Before reporting to their assigned ship, men in the QM, ET, FT, TM, MT, RM and SO ratings are normally ordered to attend courses of instruction ranging from three weeks to six months.

Men ordered to SSN or SSBN new construction will not be transferred before they have spent one year on board after commissioning.

TO BE ELIGIBLE for duty aboard an FBM submarine, you must:

- Be eligible for Secret security clearance.
- Have obligated service of 24 months from commencement of course of instruction, or date of re-

porting to the supervisor of shipbuilding in the case of men not receiving instruction.

- Be in one of the source ratings.
- Be designated SS (except for non-rated men).
- Not on current Seavey. (Men extended off Seavey by COMSUBLANT or COMSUBPAC are eligible for such duty.)

Let's now assume that you meet all the qualifications for eventual assignment to an FBM submarine, are a graduate of basic submarine school, and a qualified submariner.

If you are in one of the ratings that make you eligible for Nuclear Power School, you will go to either Vallejo, Calif., or Bainbridge, Md. There you will learn something about the field of basic nucleonics.

The curriculum at the schools include courses in math, physics, reactor principles and thermodynamics.



NUCLEAR Navymen relax while off watch on board atomic powered submarine USS Triton (SSN 586).

Plant information is also studied, including reactor technology and engineering materials and equipments.

FROM THE BASIC school you and other potential nuclear-Navy sailors will move to Idaho Falls, Schenectady, or Windsor, Conn., for a 24-week operational course. There you will study and train on a live reactor. From this school you will be assigned to an FBM crew.

(It might be mentioned here that instruction for surface personnel is identical to the submarine program. Operational training on surface ship propulsion prototype plants is conducted at either Idaho Falls, Idaho, or Schenectady, N. Y.)

Men who operate the special navigation equipment, *Polaris* missile launching and guidance control equipment, and other special equipment necessary for missile launching are trained through the *Polaris* Program.

These men, although not graduates of nuclear-power school, do begin as qualified submariners, and they do receive special training at several locations.

With the exception of SOs and RMs, men of this group start their training for the FBM program at the Navy's Guided Missile Schools, Dam Neck, Va. Men trained together in these schools generally serve together as a crew of an FBM submarine.

Some courses include more than one rate, but for the most part, single rates train together.

HERE, FOR EXAMPLE, is the background you will get if you are an ET. You will first attend a three-week navigation sub-system familiarization course at Dam Neck. An eight-week special technology course

follows. It is in the special tech course that you will first come in contact with new terms, techniques and devices associated with the program.

After these two courses, which are a general, over-all indoctrination on the FBM submarine and the *Polaris* missile system, the ETs move on to more specialized training.

At this point, the group is split up to receive different training. You will become an expert in one phase of the program. Then, when you are assigned to a crew, you will learn about additional special equipment through on-the-job training.

One group of ETs start a 19-week course learning about the Ship's Inertial Navigation System (SINS). This training is done at either Dam Neck or the factory where the gear was developed.

Another group of ETs spend a 19-week period at Dam Neck learning to operate and maintain different types of navigation data simulation computers.

A third group spends 19 weeks training on various other special navigation equipment at Dam Neck.

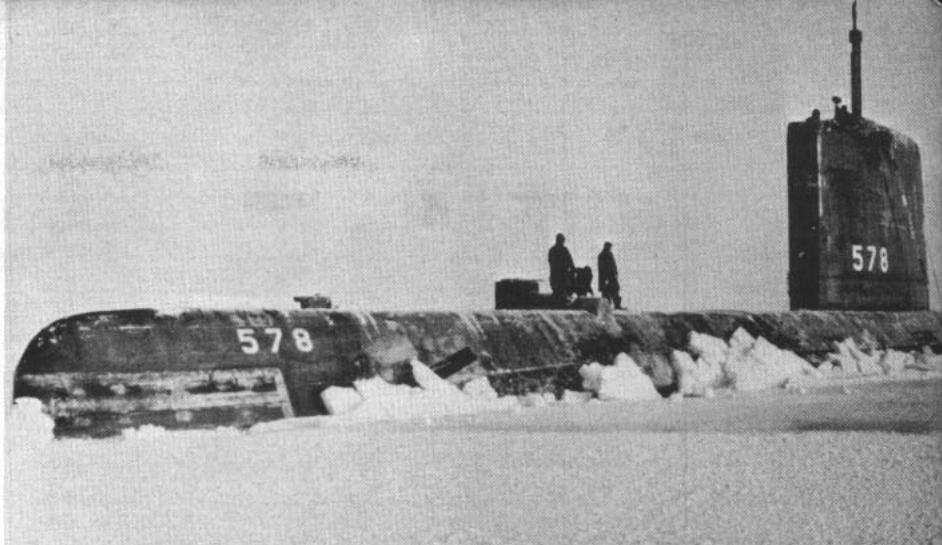
FROM ONE OF THESE schools you may go for further training aboard *USS Compass Island* (EAG 153), which is equipped with navigation equipment similar to that aboard the FBM submarines.

Quartermasters also are introduced to special navigation equipment at Dam Neck, where they take a five-week course in navigation familiarization. From there, the QMs also go aboard *Compass Island* for additional training in the operation of special navigation equipment.

Fire control technicians also start at the Guided Missile School. They first take a one-week course in weapons system orientation, and then an eight-week special technology course at Dam Neck. The special tech course is the same as that presented to many other ratings. From Dam Neck, the FTs move on to Pittsfield, Mass., for a 31-week course in SSBN fire control systems.

Missile technicians, although already trained in guided missile theory, also are given an eight-week special tech training course, followed by 25 weeks of training in the missiles and guidance course at Dam Neck.

Torpedoman's mates also have an active part in the *Polaris* missile pro-



COOL JOB — Submen take a look as *USS Skate* (SSN 578) breaks polar ice.

gram. These men spend one week in the weapons system orientation course at Dam Neck and then move on to another course at the same school on ordnance preparation.

Still at Dam Neck, the TMs complete six to nine weeks in missile ordnance and launching. They are taught how to handle *Polaris* between ship and pier, or between ships. They also study the missile-launching system.

Another group of men who undergo special training is the radiomen and another small group of ETs. They are trained to operate and maintain new type communications equipment which has been developed solely for the FBM program. A combination of short courses takes about 12 weeks.

Sonarmen may find themselves in a 31-week BQQ-2 course at Key West, or a 12-week subjective analysis course at either Key West or San Diego.

DOES ALL THIS have any effect on you? It all depends. The Navy needs men urgently for this program

and is willing to make any reasonable concession. For example:

- SS personnel serving outside the Submarine Force because they are in excess, and who want to investigate the possibility of returning to submarines via *Polaris* may address their inquiries to the Chief of Naval Personnel (Pers 2133) for sympathetic consideration.

- Anyone who wants to get into the *Polaris* Program, either the SSBN portion if eligible for submarine duty, or the support program if not, has an excellent chance via the SCORE program, no matter what his rating.

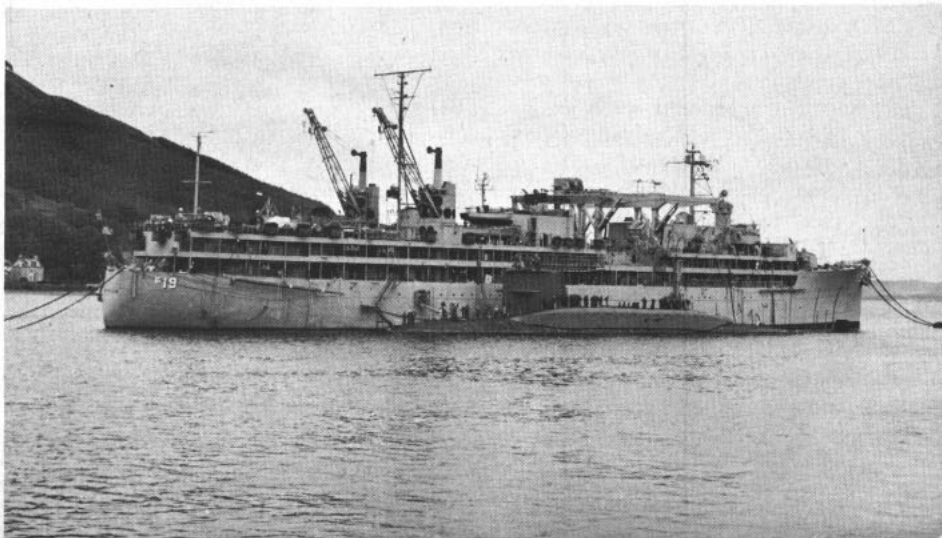
- Anyone else who is in the right rate can be considered for direct entry by submitting a NavPers 1339.

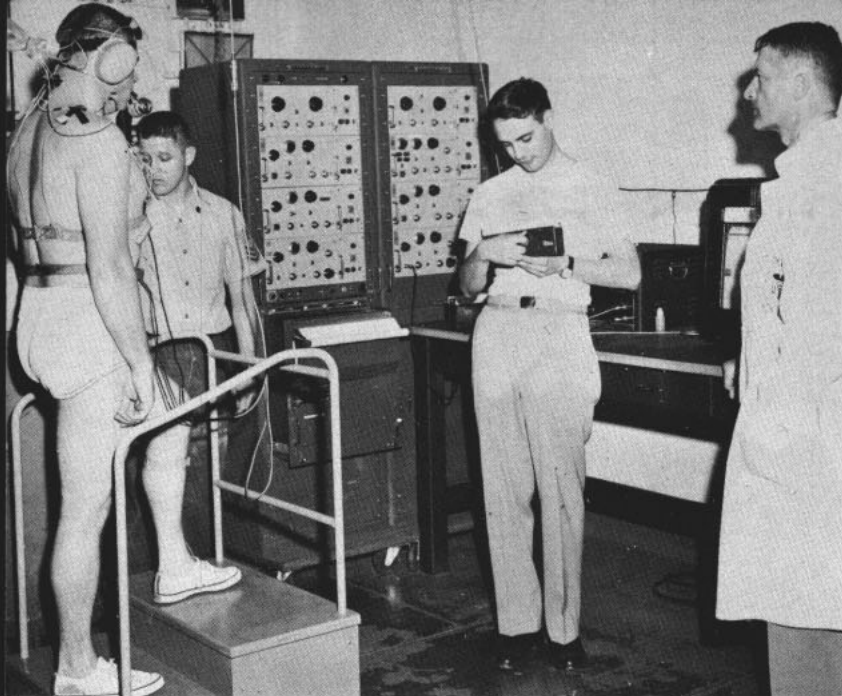
If you are a YN, SK, SD or CS, you may attend advanced training in your rating before joining an FBM crew, although this is not required. These ratings may be assigned to an FBM submarine upon becoming qualified in submarines.

So there you are. That's how you enter the nuclear Navy. It's worth investigating further.

—Jim Lewis, JO2, USN.

HOME BASE—*USS Proteus* (AS 19) tends to FBM sub in Holy Loch, Scotland.





MODERN MEDICINE—NMRI functions as a biomedical research facility investigating stresses on Navymen.

To Your Very Good Health

SCIENTIFIC ADVANCES resulting from the stimulus provided by World War II were numerous. Some of the most spectacular were in the field of medicine and surgery, which produced drugs and medical techniques that were undreamed of at the turn of the century and would have been branded as witchcraft two hundred years ago.

A large share of the credit for these advances belongs to the Naval Medical Research Institute (NMRI) located at the National Naval Medical Center, Bethesda, Md. Its experiments with protective clothing, insect repellents and desalination of sea water, together with its work with aviation oxygen equipment and in such diversified fields as the physiological effects of tropical environment and the effects of immersion in cold water, bear eloquent witness to this fact.

The results of this work were felt during World War II by all the services but, in many of these fields, work has been terminated because the needs of the armed forces have been satisfied.

Others were so successful that they have expanded beyond the capacity of the Naval Medical Research Institute.

Radiobiology, or the effect of radiation on the body, is an example. The Naval Medical Research Institute became interested in this sub-

ject before Operation Crossroads at Bikini one of the Marshall Islands.

Many Navy scientists who entered this field in its early stages are now regarded as eminent pioneers in radiology and are directors of other laboratories.

Within the services, new laboratories devoted to radiobiology and its ramifications have been created to conduct more intensive studies.

SINCE THE END of World War II, there has been considerable expansion in aviation, submarine and field medical research. Some other programs which have received considerable attention at the Institute are the blood and tissue banks which, as almost everyone knows, have graduated beyond the research stage and are now facts from which numerous Navymen have benefited.

COLD JOB—NMRI studies have led to better ways to treat frostbite.



Some of the old World War II programs were continued at NMRI, and the results were available later, during Korea. Take, for instance, the studies on immersion in cold water. Conclusions reached during these studies helped medical men in all the services in the treatment of frostbite.

The Institute is now studying the formation of ice crystals within body cells. This may ultimately lead to knowledge that would prevent damage to frozen tissue or improve methods of treating frostbite.

NOWADAYS, NMRI FUNCTIONS as a central biomedical research facility which investigates the effects of stresses imposed on Fleet and amphibious personnel by rapid technological changes in operations.

Today's engineers are able to build equipment which is beyond modern man's ability to endure. Thus today's nuclear submarine operating schedules are limited not by the ship but by the crew's endurance. We can be sure that future weapons systems will demand even more of the man.

Let's assume that we had a six-man ship designed to maintain itself at an Arctic subsurface station for two years. The engineers could build it. But could BuMed guarantee that the crew would have no heart attacks, appendicitis nor abscessed teeth for those two years? No. On this basis, one might say that the

ALL HANDS

Naval Medical Research Institute's mission is to "build a better man."

The concentrated food and distilled water available to those Navy-men might be a key to their health. On this line of reasoning, for example, the NMRI's dental research program currently is studying the possibility that dietary trace quantities of molybdenum or titanium might slow down the rate of tooth decay.

Along more prosaic lines, NMRI experiments with the prevention and treatment of diseases which the Navy considers important, and the rehabilitation of Navymen who suffer from them.

It also provides a training ground for naval personnel in research laboratory methods.

NMRI personnel are available to the Bureau of Medicine and Surgery and other naval activities for consultation and advice. This alone could one day mean quite a bit to the individual Navyman and his family.

TO ACCOMPLISH ITS MISSION, NMRI employs a staff of both military and civilian scientists from the medical, dental and allied sciences.

The scientists are well supplied both with equipment and space. To simulate conditions in various parts of the world and at different altitudes, they use human gradient calorimeters and pressure chambers. They have a ship's compartment and other spaces devoted to particular conditions.

Surgical suites, weather rooms which have temperature and humidity controls, rooms for virus- and tissue-culture work and a high amplitude vibration laboratory are available for specialized studies.

One of the principal concerns of NMRI at the present time is the prevention of infectious diseases. This is not surprising, for throughout history disease has often proved to be a more devastating enemy than formidable armies and navies.

Inasmuch as the Navy's activities cover the world, the nature and treatment of communicable diseases is of prime importance to the welfare of Navymen from the Arctic to the South Pacific.

NMRI is also interested in research concerning, among other things:

- Radiation tolerance on nuclear ships.
- The effects of prolonged sub-



marine submergence on the air the crew breathes, and the psychological effects of prolonged confinement in small spaces.

- The development of telemetering medical information during space travel.

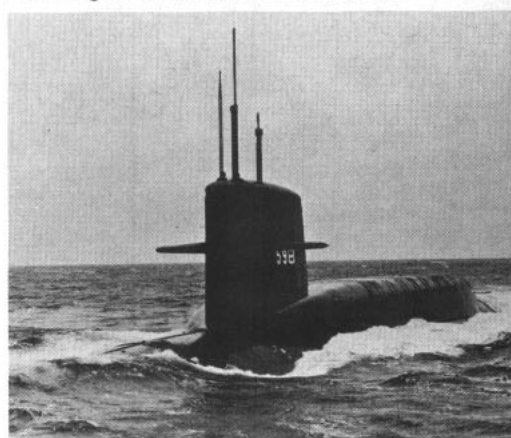
These studies involve all the complicated chemical and metabolic responses of the body to conditions found in these situations.

The effects of new battle conditions on man's mind have not been ignored. New approaches to these problems are constantly being sought, and an extensive neuropsychiatric study has been authorized.

Many of the efforts of this program will be centered around the psychiatric effectiveness of personnel assigned to future weapons systems.

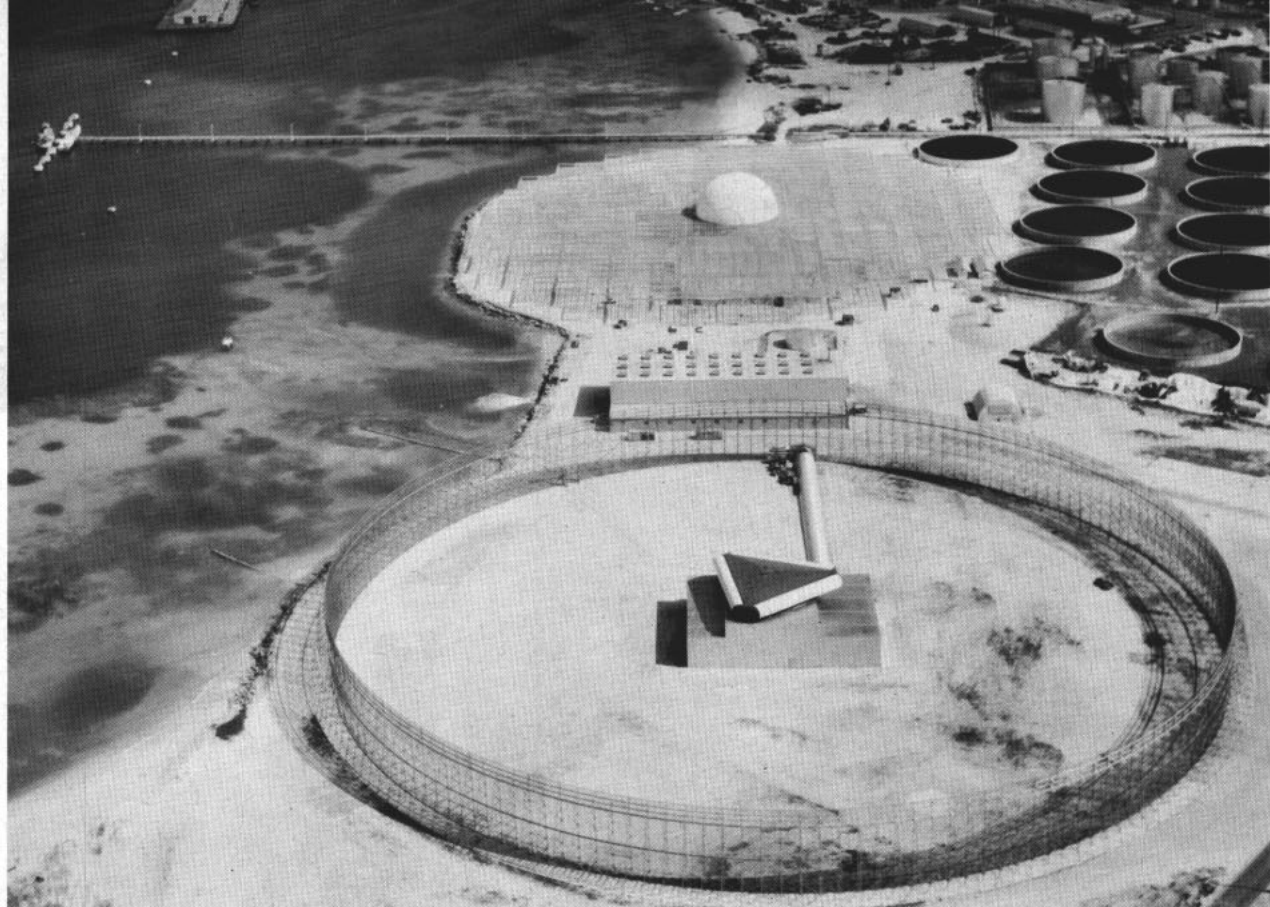
Since NMRI's founding, countless Navymen have benefited from the Institute's work. The results of the research now being conducted at NMRI will help save lives of Navy-men of the future. —Robert Neil

GROUP STUDY—NMRI tests reactions of Navymen in confinement of a fallout shelter. It has also been studying effects of long submerged cruises on *Polaris* crews.



WIRED FOR SOUND—Pilot is instrumented by Avmed division of NMRI so physiological data can be sent by radio from Panama to Bethesda.





MISSILE MASTER — Nike-Zeus radar complex at Pacific Missile Range Facility stretches out on Kwajalein.

Pearl of Micronesia

IF YOU EVER HAD occasion to stop off at Kwajalein during any of the first few years after U. S. forces wrested control of the Marshall Islands from the Japanese in early 1944, you no doubt recall it as a barren coral reef singularly devoid of any South Seas charm.

There was an airstrip. There was a signal tower. There were tents at first and then, later, some quonset huts. There wasn't much of anything else—not even a tree. Kwajalein and several of the other islands in the atoll had been subjected to a "Spruance haircut"—the fierce, World War II-developed pre-invasion naval bombardment which nearly obliterated everything above ground. At Kwajalein, the result was almost a crew-cut.

You wouldn't know the place now. As one of the main hubs of the Pacific Missile Range, Kwajalein has become a modern, completely outfitted missile facility. There has sprung up on the island a bustling, space-age community complete with palm groves, sidewalks, swimming

pools, air-conditioned offices and homes. For comfortable living the Pearl of Micronesia compares favorably, say most of those currently serving there, with any duty station in the world.

Kwajalein has had its ups and downs since 1944. While World War II was still going on Navy planners decided that, with its sheltered deep-water anchorage and 7000-foot run-

OFF DUTY — Marlin fishing is a popular sport. Flag flying indicates one of the big fish was caught.



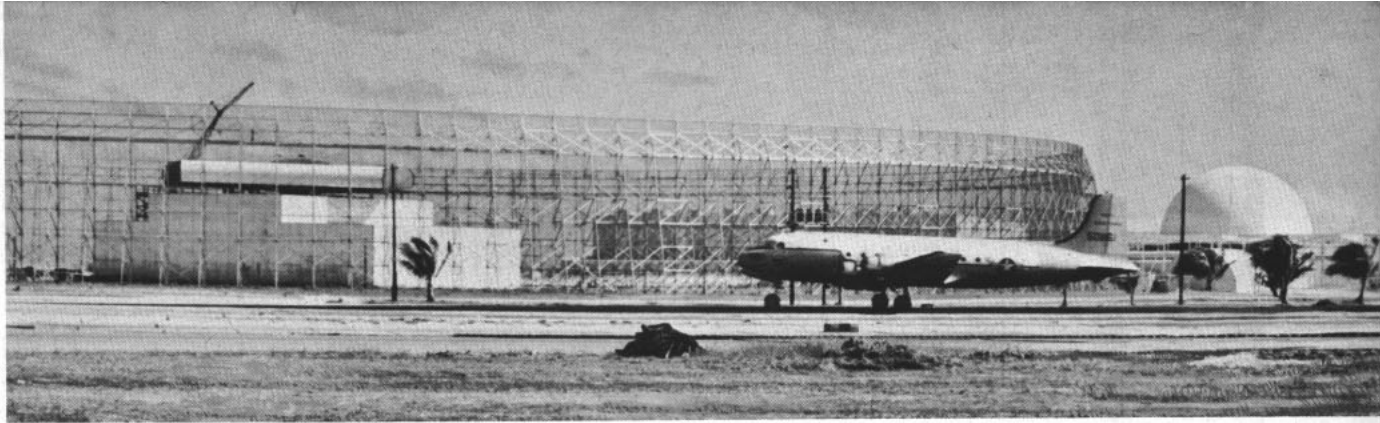
way, the island should become a permanent naval station.

The foresight of this planning became apparent in the early post-war years when Kwajalein became a major fueling and staging point for U. S. atom bomb tests at Bikini and Eniwetok. Later, however, a moratorium on nuclear tests, the Marshalls' proximity to the equator, and a shift of trans-Pacific air traffic to Wake Island, combined for a time to decrease Kwajalein's immediate importance.

Then, in 1959, the Army decided to bring its Nike-Zeus anti-missile missile system tests to the Pacific. Kwajalein was selected as the launch site for intercept tests.

CAPT P. A. Holmberg, USN, has commanded the Pacific Missile Range Facility, Kwajalein, for the past 14 months, and obviously likes his billet. At times, he sounds more like the chairman of the island's tourist bureau than its CO.

Says PMRF's boss: "For married servicemen there are permanent air-conditioned quarters completely



TAXI PLEASE — A Navy transport moves down the runway of the Pacific island's busy airfield.

equipped with modern furniture and accessories. For children there is a new air-conditioned elementary and high school, fully equipped and accredited. The school is staffed by civilian educators lured from the States by high wages, no income tax and the vacation-like living.

"There are sports aplenty for the enjoyment of the Kwajalein Islander. Marlin fishing is perhaps the most popular, followed by swimming, boating and shelling in the world's second largest atoll. A standard-sized nine-hole golf course, tennis and basketball courts, softball and football fields provide other diversions.

"Bowling alleys, libraries, five theaters and four clubs provide additional entertainment during evening hours and in inclement weather.

"And speaking of weather—more than 100 inches of rain each year provides an ample supply of fresh water, while a distillation plant helps out in the drier "winter" season. The daytime temperature varies from 75 to 85 degrees the year around."

Most of the island's 3000 population are civilians. The Navy's complement is 33 officers and 117 enlisted men.

Navy pilots fly search and rescue missions in the Kwajalein and Wake Island sectors, make flights for the Trust Territory government, and keep an aerial surveillance over the dozens of islands in the Marshalls. Mercy flights for the native population often make this flying demanding and unusual.

Nike-Zeus systems testing and development is managed by the Pacific field office of the Army Ordnance Missile Command. Operational and technical support is furnished by PMRF.

Transportation is good and traffic is brisk to and from Kwajalein. There are two regular MATS flights each week, and two MSTs ships make scheduled calls each month. The

ships bring commissary supplies and other essentials from the U. S., Hawaii and the Far East.

Kwajalein's importance as a missile and space activity increases with each passing day. ICBM test firings are carefully tracked by radar on the atoll.

Communications facilities link Kwajalein with Pacific Missile Range headquarters at Point Mugu, Calif., and with the Army's missile command at Huntsville, Ala.

And with these and all of the other customs and comforts of home which have been transferred to the island community goes an added plus. A *Nike-Zeus* missile lifting swiftly from its launching pad is an awesome spectacle any time, anywhere. Kwajalein residents, however, hold the only reserved front-row seats to the super-spectacular night shots, when anti-missile missiles roar upward to meet incoming targets boosted by *Atlas* missiles from the continental U. S.

"All this," says a recent Kwajalein arrival, "plus no smog and no TV."

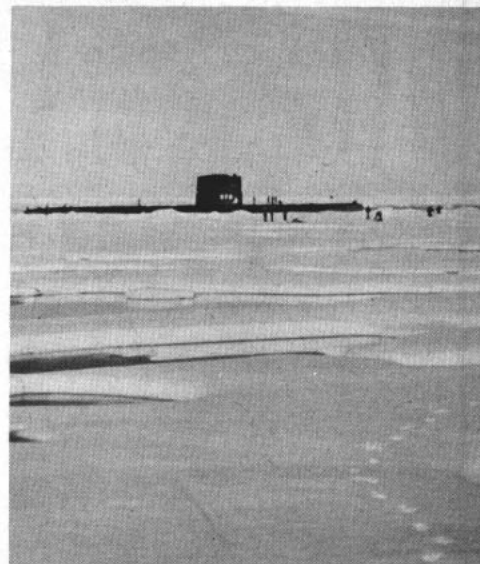
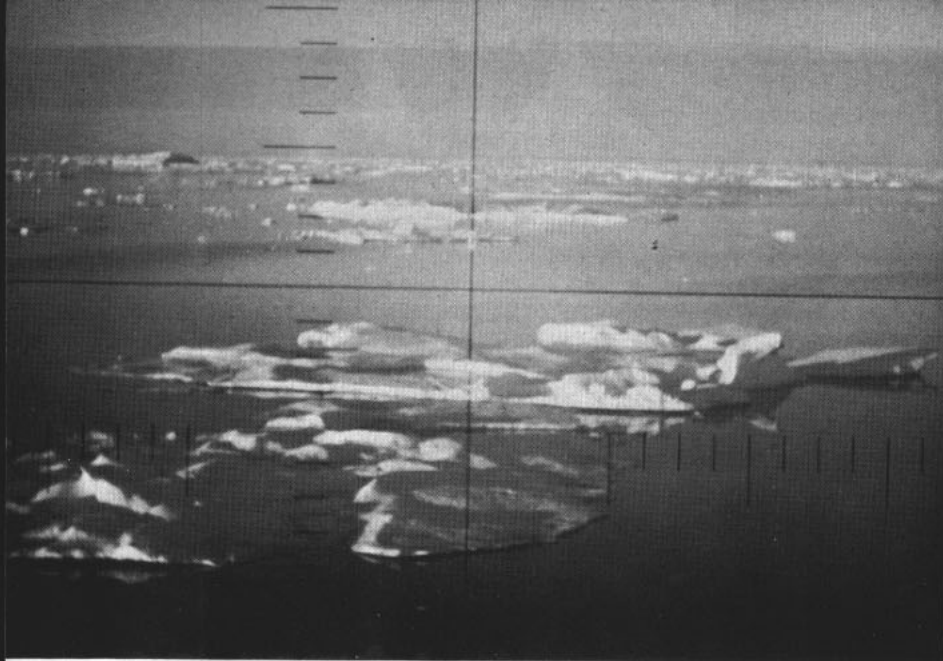


GOOD DUTY — Living in Kwajalein is good, as indicated by officers' quarters and one of the facility's large palm-fringed swimming pools.



OLD AND NEW — Battered Japanese command post of WW II stands in front of modern radar dome on Roi-Namur, at the northern point of Kwajalein.





LOOKING UP — USS Seadragon's scope scans ice formations. Rt: USS Skate and Seadragon meet at Pole.

SEE YOU AT THE NORTH

ARE CRUISES under the Polar ice cap becoming routine operations for today's submariners? Not quite. To the bewhiskered Navyman who eases his boat under the ice, crashes through to surface at the North Pole, then gets out and plays baseball, it's as adventurous today (if somewhat more comfortable) as it ever was.

The earliest known exploratory submarine cruise to the polar ice was made in 1931 by the diesel-electric-powered submarine *uss Nautilus* (SS 168). She was able to make only a cursory survey of the ice pack.

In 1953, *uss Redfish* (SS 395) accompanied by an icebreaker and helicopters, made another cruise to determine if submarines might someday be able to travel under the ice and across the top of the world.

The first ship to reach the North

Pole was the nuclear-powered submarine *uss Nautilus* (SSN 571). *Nautilus* crossed the geographical North Pole in August 1958, while en route to Portsmouth, England, from Pearl Harbor, Hawaii. Also in August 1958, *uss Skate* (SSN 578) made her first probe under the ice. Although she failed to reach the North Pole, *Skate* circumnavigated the earth within a two-mile radius.

On a second trip under the ice the following year, *Skate* logged 3050 miles during the 12 days she spent beneath the pack. She surfaced at the North Pole.

In January 1960, *uss Sargo* (SSN 583) made the first winter assault at the ice from the Pacific side of the Arctic, beginning her journey at Pearl Harbor. *Sargo* was under the ice for 31 days, covering 6000 miles.

She surfaced on 16 occasions.

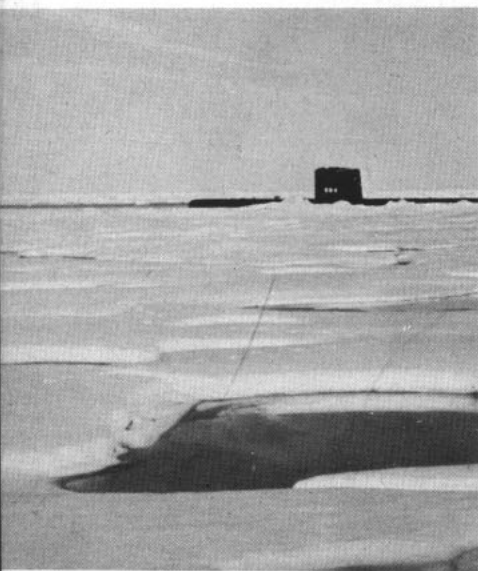
In August 1960, *uss Seadragon* (SSN 584) became the first ship to transit the Northwest Passage that links the Pacific and Atlantic through the Canadian archipelago. *Seadragon* continued on to the North Pole, crashed through the ice, and stayed long enough for crew members to engage in a game of baseball.

Two years later, or last August, *Seadragon* and *Skate* rendezvoused under the ice pack and conducted the first ASW exercise ever held at the top of the world.

What's it like to make such a journey? Nicholas R. Kieffer, TM3, veteran of the *Sargo* expedition, talked about the weather. It was quite comfortable in the sub even though the outside temperatures were between 20 and 40 degrees below zero. "The

TOPSIDE — USS Sargo surfaces through ice into Arctic night. Rt: Submen play ball on top of the world.





SUBMARINERS rendezvous at Pole.

POLE

most surprising thing to me is that it seemed warmer at the North Pole than it was before we got there."

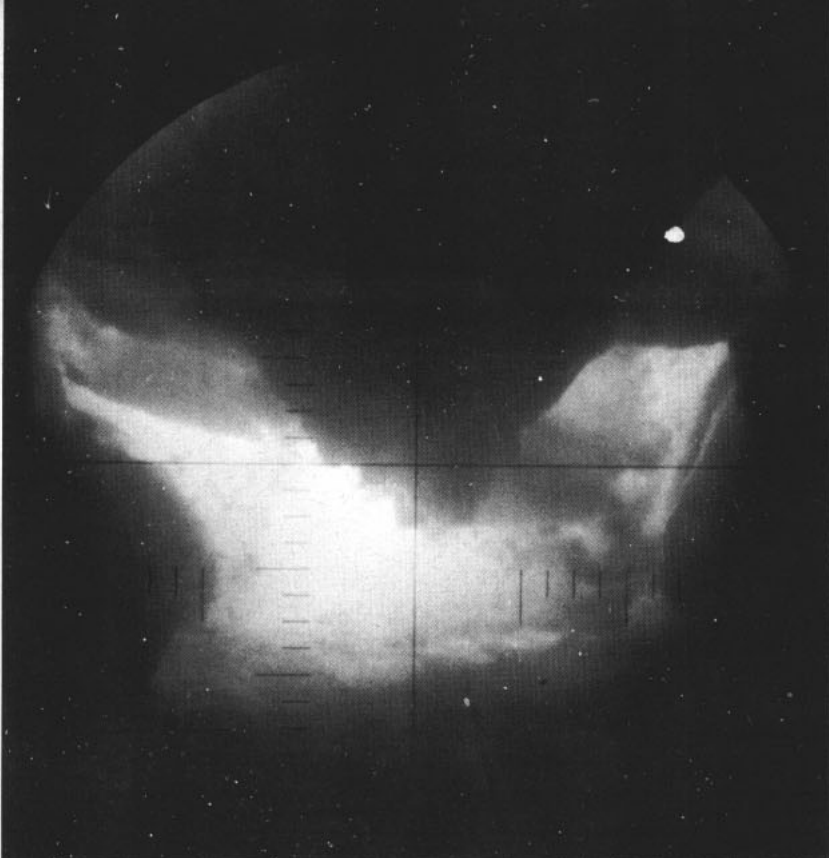
For Richard A. Robertson, IC1, the most memorable incident was "the time we punched through the ice to surface and found a one-ton chunk of ice on the conning tower."

David C. Rost, SK3, was impressed by the clothing the submariners wore during exposure to the arctic air when their ship was surfaced. "Uniform of the day consisted of long woolen underwear, standard Navy dungarees, and woolen shirt and pants, with arctic A-1 gear over the whole works." (Arctic A-1 gear is a coverall suit similar to the kind worn by aviators. The A-1 features a silk lining and nylon exterior.)

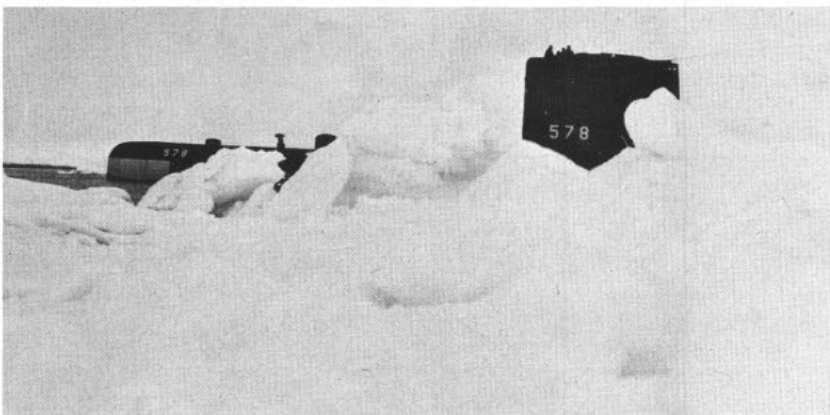
The *Sargo* voyage, which took a month-and-a-half, presented no special problems for the men who prepared the food. "We served up standard submarine fare," recalls William G. Plymale, CS1, a veteran of more than seven years in submarines and three years on board *Sargo*. "It was the most outstanding cruise of my career. We all felt that we had accomplished something very important."

Sargo's engineering officer, LT Merlin C. Ritz, contrasted the new mode of travel with that of the early overland explorers. "We made the same trip, in ease and relative comfort, that men like Peary made by dog sled at great personal risk."

JANUARY 1963



UNDER THE POLE — Bottom of polar icecap looked like this as sub searched for spot to surface. Below: USS *Skate* cracks through ice.

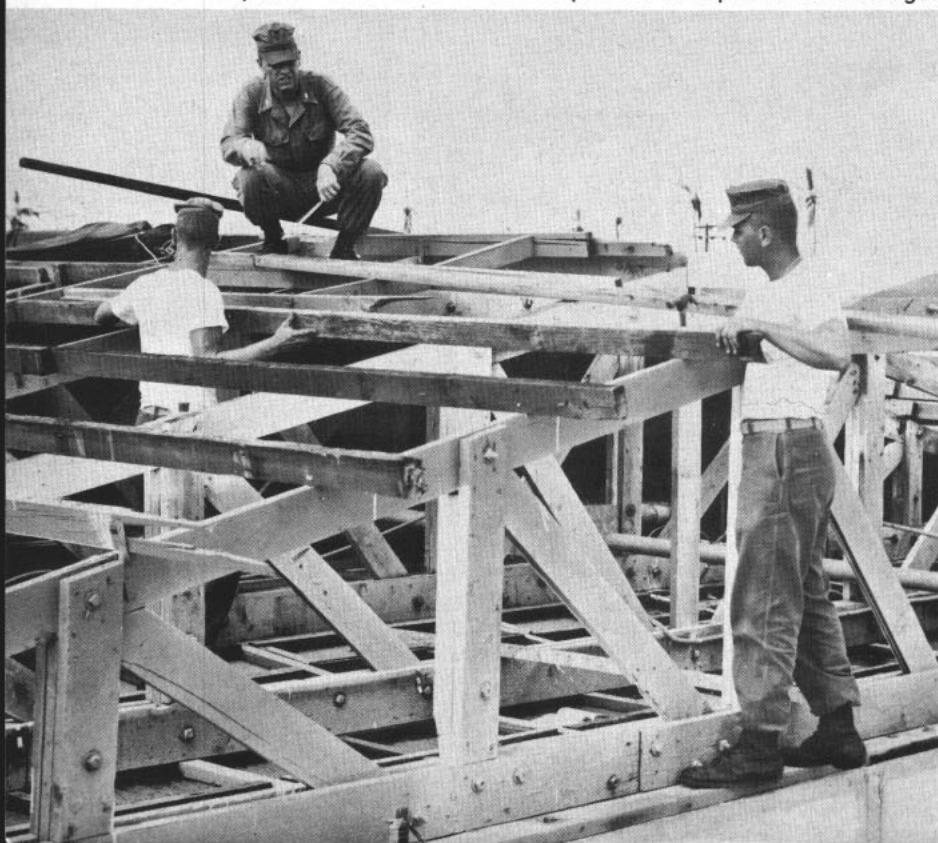


BOTTOM SIDE — Divers prepare to photograph underside of North Pole ice.





BY GREYHOUND — Navymen load clothing for disaster area aboard USS Charles Berry (DE 1035). Below: Marines pitch in to repair storm damage.



TYPHOON winds whip harbor water.

In the

ON 13 NOV 1962 the western Pacific island of Guam was all but leveled by a violent tropical storm called Typhoon "Karen." For five hours the island's 21 villages and complex of U. S. military installations were battered by winds that reached an estimated peak of 200 miles per hour. Guam-based Navymen said the damage was not only considerable—it was pathetic. Some said it was truly a miracle no one was killed, although many were injured. Debris, ranging from roofing nails to roofs, was strewn across the island's 32-mile length.

Approximately 9,000 islanders were left without food and shelter; many had escaped with only the clothes on their backs. Guam's electric power fizzled to lifelessness. More than a thousand utility poles that linked the island with electric power were down. Fresh water supplies were cut off; pumping equip-

ALL HANDS



BIG BLOW of this earlier typhoon which swept the Pacific as far as Japan, was not as strong as "Karen."

Wake of Typhoon 'Karen'

ment had been battered inoperative.

Most civilian housing and many temporary military structures had literally been blown to bits. Three small ships sank at their berths in Apra harbor; their crews made it ashore before they went down. The Ship Repair Facility was perhaps the most severely damaged military installation—official estimate: 80 per cent demolished. SRF buildings that protected precision equipment used to service ships had been blown away leaving lathes, milling machines, sensitive electronic equipment and other gear exposed to salt spray and rain.

After the storm the islanders draped what rain-soaked clothing and bedding they could salvage over bushes and makeshift laundry lines. A team of military and civilian officials surveyed the damage, called for help in a clean-up fix-up operation, and every man on Guam rolled up his sleeves and went to work.

WITHIN HOURS the banging of hammers, crunching of saws, and grunts of manual labor made up a chorus that said the rebuilding of Guam was underway. Everybody lent a hand.

There was lots to be done. One of the most immediate problems—food for 70,000 island residents—was quickly solved. Storage areas at the Guam Naval Supply Depot had enough food to feed the entire population until routine replenishments arrived. The naval station mess hall accommodated between eight and 10,000 persons each day. The Army's 25th Infantry Division set up 63 field kitchen stoves at various strategic points.

The naval hospital, meanwhile, was busy treating injuries. No epidemics were detected, and medical authorities had taken every precaution to prevent the spread of diseases not uncommon to disaster areas.

Typhoid vaccine was administered to all islanders.

A considerable amount of outside assistance was required. The situation was so bad the island had neither the manpower nor equipment to do a quick, thorough, clean-up fix-up. Within hours, help was en route to Guam from as far away as Norfolk, Va.

One of many top priorities was to restore the island's electric power. More than a thousand utility poles had to be replaced, and hundreds more needed resetting. Guam-based communications technicians managed to get the military command telephone circuits going with emergency generators. Guam public works personnel restored landing lights at NAS Agana before dark on the day of the big blow, permitting round-the-clock landings for relief aircraft. Portable generators were sped to Guam by air from bases in



NAVY CORPSMAN gives members of Fourth Marines typhus shots prior to embarking for stricken Guam. Rt: Leathernecks restore communications.



Hawaii and used for emergency power throughout the island.

PACIFIC FLEET Headquarters at Pearl Harbor, Hawaii, took charge of salvage operations, sending men and equipment to assist.

The First Marine Brigade, based at Kaneohe, Hawaii, had 400 Marines in aircraft en route to Guam hours after the disaster to aid in clean-up.

Pearl Harbor's Public Works Center sent 80 civilian power cable splicers, power linemen, diesel mechanics, and telephone linemen. Additional public works help came from Subic Bay, Philippines.

At Port Hueneme, Calif., 100 Seabees of Mobile Construction Battalion 11 were immediately airlifted to start major rebuilding projects. The remainder of MCB 11, nearly 400

men, left for Guam two days later on board the MSTs transport USNS Barrett (T-AP 196).

The Naval Air Station at Barber's Point, Hawaii, was loading site for emergency generators, water purification tablets, and other items urgently needed at Guam. Tactical Support Squadron 21 shuttled hundreds of volunteer technicians. Two VR 21 aircraft were on the way to Guam the evening of 13 November with volunteers from the Hawaiian Electric Company and Pearl Harbor's Naval Shipyard and Public Works Center. Another aircraft carried 45 Navy constructionmen and their equipment. A fourth carried two crews from the Hawaiian Telephone Company, 13 Army Signal Corpsmen based at Schofield Barracks in Honolulu, more Seabees, and 1500 pounds of equipment. All these men had volunteered for underground electric cable work, diesel engine repairs, telephone repairs, and line construction.

WITHIN TWO DAYS the landing and parking facilities at NAS Agana had been restored and the field was capable of handling commercial air traffic.

Three days after the storm the Ship Repair Facility was back in operation and could perform virtually any repair job with makeshift equipment. The SRF crew of 700 men had found enough canvas to cover every piece of exposed gear. They then washed down and preserved their equipment. SRF phones were restored and emergency generators installed until the major base power supply once again became operational.

Days later many pumps still lacked power and water pressure was limited to low coastal areas. Most villagers, however, soon had clean, fresh water. Others were serviced by tanker-trucks.

The MSTs transport USNS *General Daniel I. Sultan* (T-AP 120), which had arrived at Guam on the day of the storm while en route to Japan, remained for a week to assist in salvage, security, recovery, and to provide emergency power and a myriad of services. *Sultan* passengers (1100 Army troops) assisted in special clean-up details. LT John C. Leissring, MC, USN, set up a miniature hospital in the ship's sick bay and formed a medical team to treat islanders injured in the storm.

Eyewitnesses Describe Conditions at Height of Typhoon

"Stones flying over roof tops sounded like shotguns being fired as they struck buildings." This was the comment of Lieutenant "VO" Campbell, Maintenance Officer of Navy Patrol Squadron 28, who was on Guam when Typhoon "Karen" blasted her way across the island last November.

The squadron, on training maneuvers in the area, had landed at Guam to refuel their six deployed planes when the island was alerted to Typhoon Condition 1.

Arthur E. Seibert, ADRC, reported the barracks they were in—supposedly typhoon-proof—shuddered under the strain of the gale force winds. He said, "Occasionally, a door or storm window would blow away and torrents of rain would lash through the building, drenching everyone and everything, leaving the building standing in a couple of inches of water."

In trying to describe how strong the wind was. Thomas W. Jarrell, AOC, retold a conversation he had with a man after the storm. He said, "A friend and I were looking for shelter when a tremendous gust of wind knocked us down. When I got up my friend was nowhere in sight." It was learned later that the man had been picked up by the sudden gust of wind and carried about 50 yards away.

Once the storm had passed, the VP-28 sailors teamed up with emergency rescue crews setting up aid stations, getting fresh water supplies and used their professional skill in helping restore electrical power to the base.

The 40 non-flying members of the squadron's ground support unit remained on the island until 16 November to lend a helping hand in clearing the rubble and rebuilding the typhoon-ravaged base.

Another *Sultan* doctor, LT Richard W. Warren, MC, USN, took the evening duty in obstetrics at Guam's crowded naval hospital. (Delivered by Dr. Warren in less than a week: 12 babies.)

Sultan's sick bay took over the laundry and sterilization chores for the naval station dispensary, and *Sultan* corpsmen joined other Navy and Marine hospitalmen in the mass typhoid immunization program.

Many civilian passengers volunteered their professional services. Doctor and Mrs. Richard Morovitz, and five nurses and seven nurses' aides, marched to the hospital to help treat the injured. More than 30 civilian electricians and diesel engineers from the ship worked around the clock with Public Works Center personnel energizing auxiliary diesel plants for island power. Others joined island personnel in electric wire restringing operations.

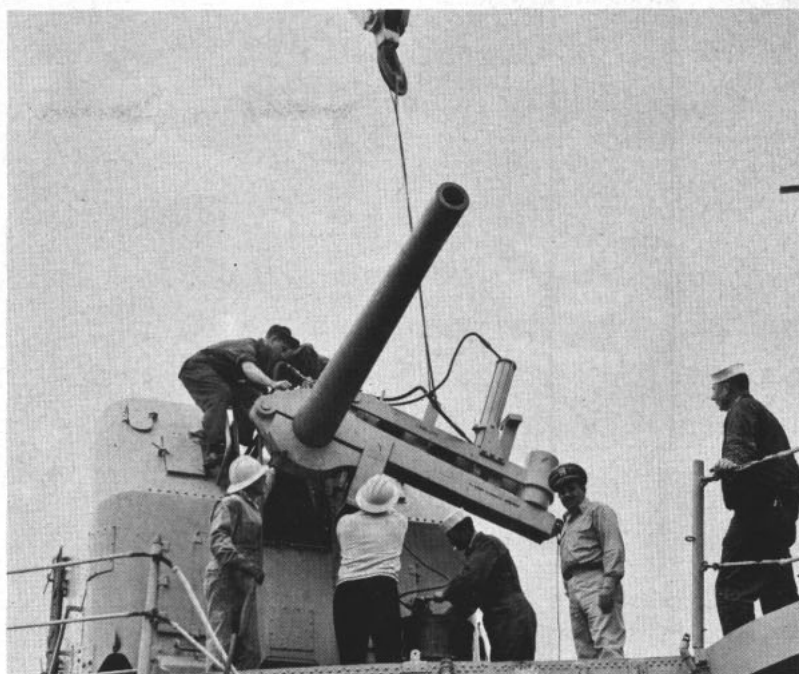
THE SEVENTH FLEET salvage ships *USS Bolster* (ARS 38) and *USS Reclaimer* (ARS 42) assisted in raising the ships sunk in Apra Harbor—the Korean patrol craft *Han Ra San*, the *Philippines' C-26 Negros Oriental*, and the dredge *John S. Campbell*. The dredge was the first to be raised; its use was urgently required to keep pace with an undisclosed timetable for dredging out some sections of the harbor to make passage room for special submarine tenders which will some day service Fleet ballistic missile submarines earmarked for Pacific duty.

Back at Pearl Harbor, equipment too bulky to be airlifted was loaded aboard ships and sent by sea. Fourteenth Naval District Headquarters (Pearl Harbor) collected relief supplies from local charity sources and soon had accumulated 2500 pounds of lightweight clothing (appropriate for Guam's tropical climes) and more than 5000 pounds of food.

At Norfolk, Va., U. S. Atlantic Fleet Headquarters messaged the Pacific Fleet that east coast sources were prepared to ship medical supplies, toiletries, and clothing. The weekend following the storm two aircraft loaded with 20,000 pounds of supplies departed east coast airfields for San Diego, where the goods were put on Guam-bound ships.

At last report, Guam had almost returned to the shape she was in before the visit of Typhoon "Karen."

— Dan Kasperick, JOI, USN



BARREL ROLLING — A new gun barrel is tightened in a turret on DD.

Fastest Regunners in the West

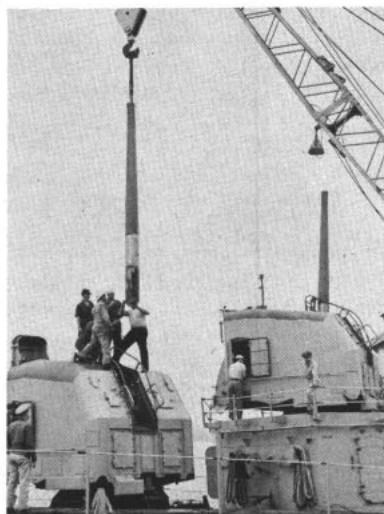
Crew members of the Cruiser-Destroyer Force Pacific Fleet destroyer tender *USS Bryce Canyon* (AD 36) have staked a claim to being the "fastest regunners in the west" (afloat type, anyway) these days. They're basing it on the swift switcheroo they accomplished recently aboard the destroyer *USS Watts* (DD 567).

Using a crane, a giant regunning tool which could well have found a home in the legendary Paul Bunyan's tool kit, and a lot of elbow grease, the hustling tendermen removed all of *Watts'* old five-inch gun barrels and installed new ones in just a day and a half.

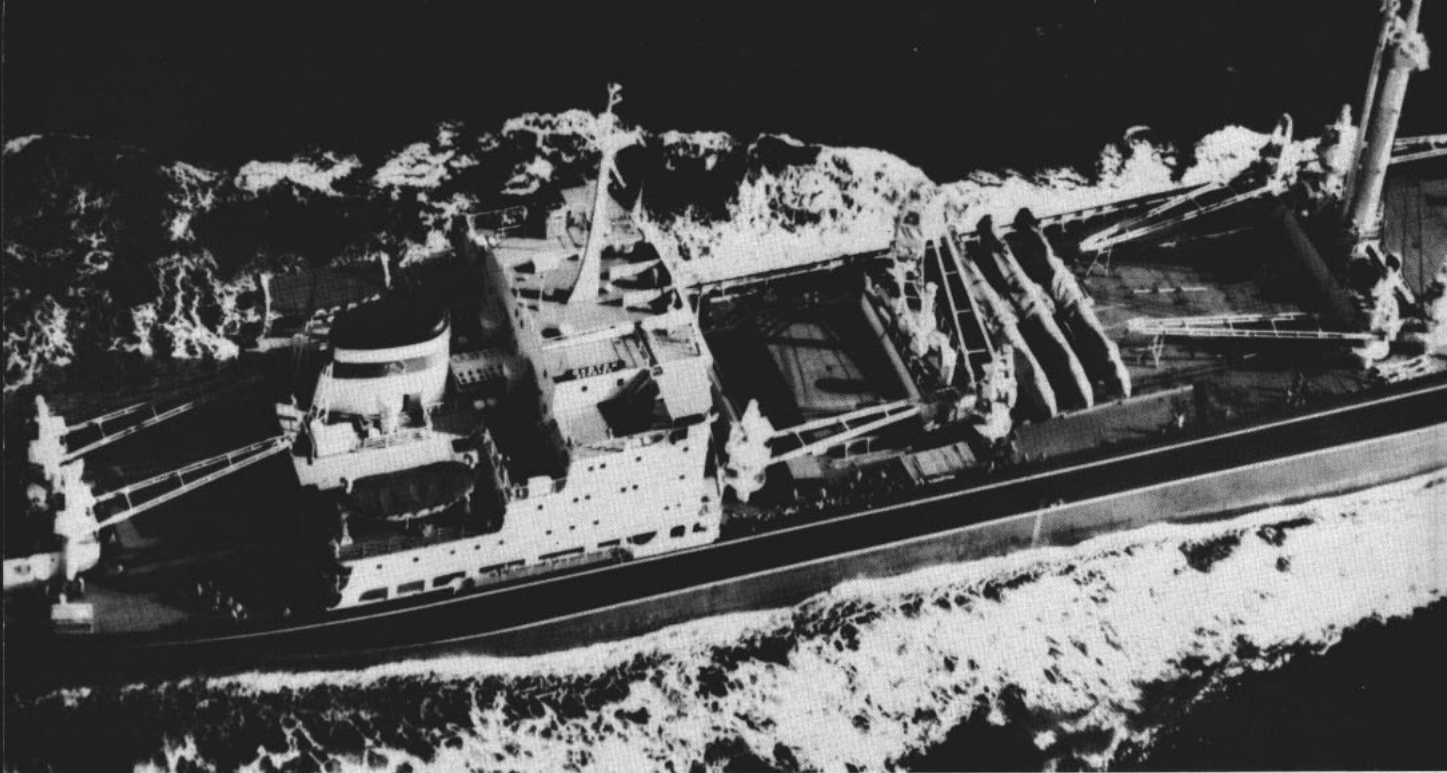
It was a sparkling performance—especially when you consider that until about a year and a half ago, the Navy considered a job of this scope beyond the capabilities of an AD. It took them eight days the first time, but the *Bryce Canyoners* proved it could be done. That was a little more than 16 months ago—and in the interim they've polished and refined their techniques while performing similar refittings on three other CRUDESPEC tincans. Now, with the *Watts* job, these destroyer tender quick-draw artists have demonstrated that they can barrel through such an assignment with the best of them.

The *Bryce Canyon's* top-drawer achievements in the regunning field will come as no surprise to those who knew her record as one of the Navy's top ships.

The Long Beach-based tender became the first ship in the Navy to win a Gold "E" award a couple of years back. In all, she's been awarded six Battle Efficiency "E's"—and is currently gunning for more.



BARRELING DOWN — Ordnance repair team from *USS Bryce Canyon* (AD 36) lower a replacement gun barrel on *USS Watts* (DD 567).



RETURN TRIP — Soviet ship *Okhotsk* heads out from Cuba with three bomber fuselages on her deck.

Action Report: Cuban Crisis

ACTIONS OF THE U. S. military services during the Cuban crisis have been outlined by the Department of Defense. Summaries of actions by the Army, the Navy and Marine Corps, and the Air Force were listed.

Here is the roundup that shows the role performed by Navymen and Marines.

On 1 Oct 1962 forces of the Commander in Chief, U. S. Atlantic Fleet, were engaged in normal training and upkeep throughout the western Atlantic and Caribbean areas. VADM John McNay Taylor, USN, Commander Second Fleet, embarked in *uss Newport News* (CA 148), was at sea off Nova Scotia. Antisubmarine carriers *uss Wasp* (CVS 18), *Essex* (CVS 9) and *Lake Champlain* (CVS 39) were in the Boston-Newport area. *uss Intrepid* (CVS 11) was at sea off New York and *uss Randolph* (CVS 15) was in Norfolk, Va. Cruisers and destroyers were engaged in local operations stretching from Newport to Guantanamo.

In the Caribbean, the guided missile cruiser *uss Canberra* (CAG 2), six destroyers and one amphibious ship were in Guantanamo. *uss Shangri La* (CVS 38) and seven destroyers were in Mayport, Fla.

Attack aircraft carriers were located as follows: *uss Enterprise*

(CVAN 65) was en route to Norfolk from the Mediterranean; *uss Independence* (CVA 62) and *Saratoga* (CVA 60) were in the Norfolk area.

Destroyers and submarines were in Key West. Normal air patrols and training were being carried out in Key West, Roosevelt Roads (Puerto Rico) and Guantanamo.

A regularly scheduled exchange of the Marine Battalion Landing Team in the Sixth Fleet in the Mediterranean was in progress.

THE ATLANTIC FLEET operations schedule for the period 18-26 October was as follows:

- PHIBTRALEX 3-62 (Amphibious Training Landing Exercises)—amphibious landing exercises and training afloat and ashore in the Vieques area, scheduled for 27 Aug-2 Nov, was still in progress, involving Amphibious Squadron Eight with the 2d Battalion of the 2d Marines embarked.

- UNITAS III—third annual ASW training exercise conducted by Commander South Atlantic Forces, RADM J. A. Tyree, Jr., USN, with several South American countries during the period 17 Aug-10 Dec.

- PHIBRIGLEX 62 (Amphibious Brigade Landing Exercise)—an exercise designed to train and exercise

naval forces to conduct an amphibious assault and associated naval operations from Onslow Beach, N. C., to the Virgin Islands in the Caribbean, 15-30 Oct. Principal forces involved were as follows:

- *uss Independence* (CVA 62), *uss Randolph* (CVS 15), *uss Okinawa* (LPH 3), *uss Thetis Bay* (LPH 6), 15 destroyers, 14 amphibious ships, 3 submarines, 4 mobile support ships, and 1 Marine expeditionary brigade (1 regimental landing team, 1 composite Marine aircraft group, plus supporting units).

- SWEEP CLEAR III—joint Canadian and U. S. minesweeping exercise off Nova Scotia.

Beginning 19 October all aircraft and squadrons not required for air defense, reconnaissance and ASW surveillance were relocated because of overcrowding at Florida bases.

More than 40 ships got underway commencing on 15 October to carry out the scheduled PHIBRIGLEX 62. Surveillance of the shipping lanes was being carried out throughout the Caribbean area.

THE INFLUX of an average of 30 ships per month, Soviet and Soviet-chartered, loaded with military equipment and Soviet personnel, made it mandatory that surveillance

flights be made over suspected missile installation sites on the island of Cuba.

Navy and Marine Corps air units were ordered into southern Florida and Caribbean air stations to bolster air defense capability. All air and surface units of the Atlantic Fleet were placed in an increased readiness state and many were ordered to sea. Marine air and ground units were alerted for possible developments.

The orders to increase the aerial surveillance of Cuba to confirm the presence of missile sites were first filled by F8U *Crusader* photographic planes flown by pilots of Navy Light Photographic Squadron 62 and Marine Corps Composite Reconnaissance Squadron Two, operating from bases in Florida. More than 80 sorties composed of from two to 10 aircraft totaled more than 100 hours of photographic surveillance.

Maritime surveillance was performed by P2V *Neptunes*, P5M *Marlins*, S2F *Trackers*, WV *Warning Stars* and helicopters flying a total of more than 20,000 hours during the crisis. Approximately one-half of this total was flown by carrier-based aircraft (S2F *Trackers* and helicopters).

AS AERIAL PHOTO reconnaissance confirmed that Soviet offensive missile installations were in place and under construction in Cuba, the full mobile capabilities of the Navy-Marine Corps team were brought into play. Troops were loaded swiftly and units moved to attain a posture which would make possible any action ordered with a minimum reaction time.

On Sunday afternoon, 21 October, President Kennedy received a final definitive report that MRBM and IRBM missile facilities were being installed and that IL-28 1000-mile range bombers were being assembled in Cuba.

22 October

The evacuation of dependents from Guantanamo was carried out. Three hundred and ninety were brought to Norfolk by air and approximately 2800 were loaded aboard USNS *Upshur* (T-AP 198), USS *Duxbury Bay* (AVP 38), USS *Hyades* (AF 28) and USS *DeSoto County* (LST 1171), scheduled to arrive in Norfolk, Thursday, 25 October.

The ready Marine battalion landing team in ships of PHIBRON Eight was landed in Guantanamo.



BACK THEY GO — Navy dependents board MATS plane for return to Gitmo.

A Marine force was airlifted from California to Guantanamo Bay by MATS and other Marines moved by surface craft.

One Marine infantry battalion from Camp Lejeune, N. C., arrived in Guantanamo by air.

Battalion landing teams from Camp Lejeune were ordered to load out in available amphibious lift of PHIBRON Six and Eight at Norfolk, Va., and Morehead City, N. C., to proceed to sea as soon as ready.

President Kennedy spoke to the nation on television and radio that evening.

Secretary of Defense Robert S. McNamara later announced that Admiral George W. Anderson, USN,

Chief of Naval Operations, had been designated Quarantine Representative for the Joint Chiefs of Staff and that Admiral Robert L. Dennison, USN, Commander in Chief Atlantic, would be responsible for carrying out duties assigned by the Joint Chiefs of Staff.

The force prepared to implement the quarantine was commanded by VADM Alfred G. Ward, USN, Commander Second Fleet, who was in the cruiser *Newport News*, having relieved VADM Taylor on 20 October as previously scheduled.

Supporting his flagship was *Canberra*, the support carrier *Essex*, several squadrons of destroyers, and the requisite oilers, ammunition ships,

Return to Gitmo

Most of the dependents of Navy and Marine Corps personnel permanently assigned to the Naval Base, Guantanamo Bay, Cuba, were permitted to return in time for Christmas.

Approximately 1400 of the more than 2000 who were evacuated at the beginning of the Cuban crisis were expected to return by the first available transportation to join husbands and fathers whose tours of duty at Gitmo extended beyond 1 April.

Dependents of men scheduled

for transfer from the base before that date were not returned.

The MSTs transport USNS *Geiger* (T-AP 197) was scheduled to sail from New York 11 December and 19 December with space for 400 dependents each trip. Air transportation was available in MATS flights from Norfolk beginning 11 December.

Personnel ordered to Guantanamo in the future will be permitted to take their dependents in accordance with instructions issued before the Cuban crisis.



KING-SIZE *Enterprise* (CVAN 65) was flagship of TF participating in quarantine. Below: Part of the Navy team that had role in Cuban Crisis.



USS *Newport News* (CA 148)



USS *Canberra* (CAG 2)



USS *Saratoga* (CVA 60)



USS *Shangri La* (CVS 38)

USS *Joseph P. Kennedy, Jr.* (DD 850)



etc. Admiral Ward's force had the designation of Task Force 136.

Task Force 135, commanded by RADM John T. Hayward, USN, Commander Carrier Division Two, stood by ready to come to the defense of Guantanamo if needed. His flagship was *Enterprise*, with more than 100 Navy and Marine aircraft on board. Aircraft types included F8U *Crusaders*, F4H *Phantoms*, A4D *Skyhawks*, A3J *Vigilantes* and AD-6 *Skyraiders*.

Additional support was available in the carrier *Independence* and supporting ships of Carrier Division Six, commanded by RADM Robert J. Stroh, USN. *Independence* also carried more than 100 aircraft including F8U *Crusaders*, F3H *Demons* and WF-2 *Tracers*.

All Atlantic Fleet mobile logistic forces were loaded and ordered to sea in support of Fleet forces deployed.

Protection of shipping was undertaken in Florida Straits, Windward Passage and Yucatan Channel by naval patrol aircraft and destroyers.

23 October

Organization of American States approved United States plan of action, including participation in quarantine actions where feasible, in the establishment of a quarantine and in actions to require that Soviet offensive weapons be withdrawn from Cuba.

UNITAS III was canceled and the U. S. Navy forces were ordered to the Atlantic to carry out tasks to be assigned.

President Kennedy issued the Quarantine Proclamation and set effective time as 10 A.M. (EDT), Wednesday, 24 Oct 1962.

Headquarters, RLT-6 arrived at Guantanamo Bay Naval Base.

24 October

At 10 A.M. (EDT), the Quarantine of Cuba was established and carried out by the air and surface units of the United States Atlantic Fleet.

No significant events during the first 24 hours. The aerial photographic reconnaissance flights continued.

Effective 24 October, the air and surface units of the quarantine forces began to intensify their search for Cuba-bound merchant shipping that might carry prohibited material. This material included surface-to-surface missiles, bomber aircraft, bombs, air-to-surface rockets and guided missiles, warheads for any of the above weapons, mechanical or electronic equipment to support or operate those items, and any other classes of material designated by the Secretary of Defense.

The Marine Corps buildup afloat was completed by 28 October, with officers and men embarked in amphibious ships of the Atlantic Fleet and additional forces en route to the Atlantic from the Pacific in amphibious ships of the Pacific Fleet.

SHORTLY AFTER 8 A.M. (EDT), 25 October, the first Soviet ship, a tanker, *Bucharest*, was intercepted and her cargo checked visually by a U. S. Navy destroyer without boarding. It was determined that she was carrying oil, as stated by her master, and she was cleared to proceed.

At 7:50 A.M. (EDT), 26 October, the Lebanese-flag, Soviet-chartered freighter *Marucla* was intercepted and boarded (see ALL HANDS, December 1962, page 2) by a party from the destroyers *uss Joseph P. Kennedy, Jr.* (DD 850) and *uss John R. Pierce* (DD 753). The boarding party returned to their respective ships at 10:20 A.M. (EDT) and reported as follows:

"No incidents. No prohibited material in evidence. All papers in order. Obtained copy of manifest. Cargo 12 trucks deck-loaded. All holds loaded to capacity. No passengers. *Marucla* cleared to proceed course 260, speed 9 knots to Havana via Providence Channel. Maintaining surveillance."

From 24 October until 6:45 P.M. (EST), 20 November, 55 merchant ships passed through the quarantine after their cargoes had been determined to contain no prohibited material. No ships were diverted or

found to carry any of the prohibited material.

uss *Enterprise* had returned to Norfolk, Va., from the Mediterranean on 12 October and got underway on 18 October. Destroyer Squadron 16 (seven destroyers) had returned from the Mediterranean on 3 October and got underway on 19 October. Amphibious Squadron Six (five ships) had returned from a five-month deployment on 19 October and got underway on 21 October.

FROM 22 OCTOBER to 20 November, Navy and Marine aircraft flew approximately 30,000 flight hours, covering a distance of more than six million miles; used five million gallons of aviation fuel; flew approximately 9000 flights. Eight aircraft carriers involving more than 25,000 people have been part of the quarantine forces.

Ninety ships of the Cruiser-Destroyer Force Atlantic Fleet have steamed more than 780,000 miles in maintaining the quarantine barrier. Each one of the eight carriers steamed more than 10,000 miles.

Commander Service Force Atlantic Fleet provided logistic support to an afloat population of more than 85,000 in 183 ships deployed over a 2100-mile front.

Admiral George W. Anderson, USN, Chief of Naval Operations, stated 9 November that: "The presence of many Russian submarines in Caribbean and Atlantic waters provided perhaps the finest opportunity since World War II for the U. S. naval antisubmarine-warfare forces to exercise at their trade, to perfect their skills and manifest their capability to detect and follow submarines of another nation. In tomorrow's newspapers, I'm sure you will see photographs of some of the submarines that came to the surface after the persistent surveillance of United States ships and United States aircraft."

ALTHOUGH not recalled by the President for the Cuban crisis, the civilian sailors of the Naval Air Reserve provided an enthusiastic volunteer back-up force for the Fleet, both in logistic support and in actual sea surveillance along the eastern seaboard and Gulf of Mexico.

Inspired by the President's message of 22 October, Reservists from Naval Air activities at South Weymouth, Mass.; New York; Lakehurst,



HAPPY DAY — Navy families register for flight back to Guantanamo.

N. J.; Willow Grove, Pa.; Andrews Air Force Base, Washington, D. C.; Norfolk, Va.; Jacksonville, Fla.; New Orleans, La.; and Glenview, Ill., manned their *Neptune* patrol bombers, *Trackers* and transports for these voluntary operations. In so doing, they logged more than 775 hours in logistic flights and some 350 hours of surveillance. More than 620,000 pounds of valuable cargo, and more than 1000 passengers were transported more than 122,000 miles.

These voluntary operations by the Naval Air Reservists included their sighting and reporting of 190 different foreign surface and underwater craft, including merchant ships, Russian trawlers and fishing factories, Russian merchant ships, a Russian electronic ship and an "unfriendly" submarine.

UNDER THE COMMAND of RADM John A. Tyree, USN, *Cinclant* established the inter-American Combined Quarantine Force. This force included two Argentine destroyers, *Rosales* and *Espora*; two patrol frigates from the Dominican Republic, *Gregoria Luperon* (F-103) and *Capitan Pedro Santana* (F-104); and two destroyers from Venezuela, *Zulia* and *Nueva Esparta*. Arrangements for these combined operations were made in conformity with the further resolution adopted on 5 November by the Council of the Organization of American States acting provisionally as arranged in consultation.

President Kennedy announced during his press conference 20 November that the agreement by the Soviet Russians to remove the IL-28s from Cuba had enabled the United States to withdraw the quarantine imposed on 24 Oct 1962.

ABOUT 6:45 P.M. (EST), 20 November, the Commander in

Chief U. S. Atlantic Fleet was directed to discontinue operations and to return units to normal operations.

The Atlantic Fleet Commander also directed Commander Antisubmarine Force, Atlantic Fleet, VADM E. B. Taylor, USN, to be prepared to locate and photograph Soviet ships leaving Cuban ports with IL-28 aircraft aboard. The requirement was expected to last for about 30 days in accordance with information provided by the Soviet Union that the aircraft would be out of Cuba within 30 days.

At the same time, Commander in Chief Atlantic, Admiral Robert L. Dennison, USN, directed RADM John A. Tyree, USN, to discontinue quarantine operations of the inter-American Combined Quarantine Force and to make recommendations for training exercises and/or port visits for the Argentine, Venezuelan and Dominican Republic forces involved.

As the orders went out to dissolve the quarantine forces, more than 63 ships of the mighty force which had clearly demonstrated its capability to respond quickly to its country's needs had an opportunity to be home for Thanksgiving. Other ships followed, many arriving during the following weekend.

Admiral Anderson pointed out the following:

"The entire operation has been a magnificent testimonial not only to the senior leaders of our government, but also to those commanders and commanding officers at lower levels who were so quickly able to move their troops—large numbers of troops—their ships—many ships—and their aircraft of many types in position to carry out lengthy, tedious and often very sensitive operations with a high degree of leadership, professional competence, courage and diplomatic skill." ★ ★ ★ ★ ★

A Sailor of

WHAT WAS THE ORIGINAL USS *Bainbridge* (DD 1) really like?

"She was a dandy target . . . held together with baling wire."

Thus began the recollections of Charles W. Ritz, who retired in 1926 after 16 years of active Navy service, as told in a report from CRUESPAC.

"I spent 11 years on board nine different DDs. I was chief water tender on *Bainbridge*, *Chauncey* (DD 3), *Decatur* (DD 5) and some destroyers of later vintage.

The destroyers Chief Ritz knew were not noted for a sleek appearance. They were built for speed. Their hulls were crammed with boilers and engines. They had none of the gear that is standard equipment today, such as radar, elaborate radio equipment and antenna displays.

The bright flames that shot forth from the short stacks of the old coal burners made them dandy targets at night.

"I don't know how I got through it.

"Today's *Bainbridge* (the recently commissioned nuclear-powered guided missile frigate) could take on a whole flotilla of the first DDs and walk right through them.

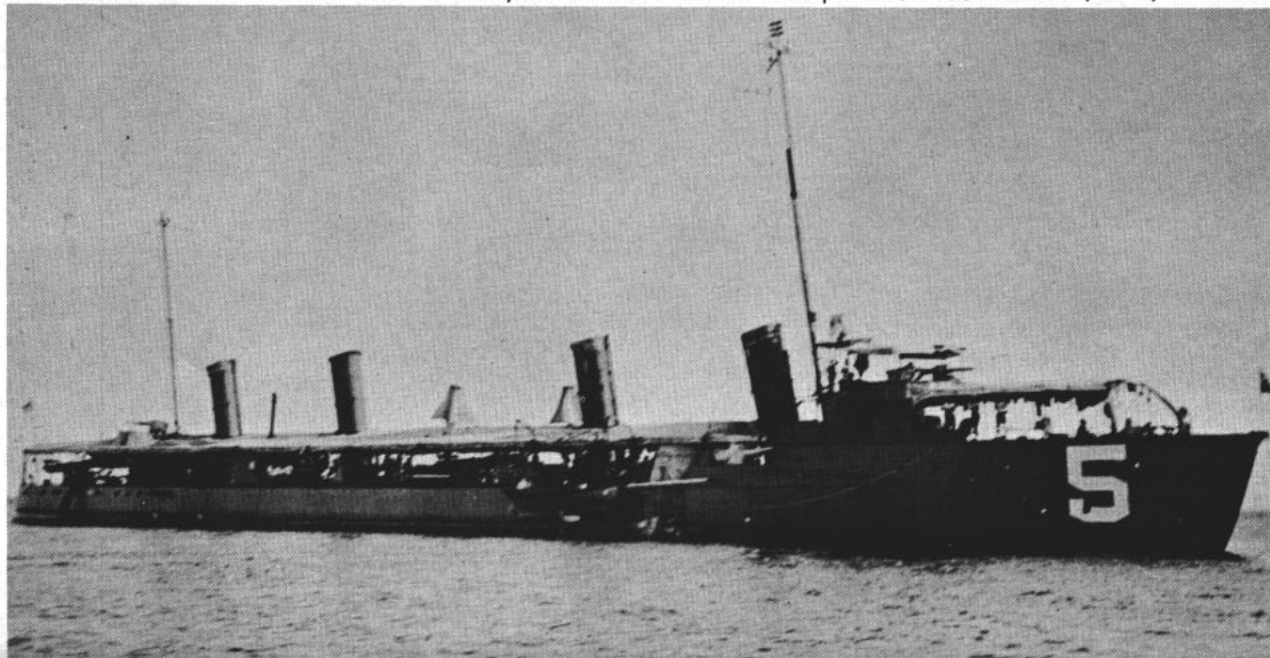
"It was all we could do just to keep those old cans repaired. The boiler and engine rooms were hot—140 degrees—and dark, too.

"The decks would get so hot we'd have to wear clop-clops to keep our feet from burning."

Clop-clops, Chief Ritz explained,



LOOKING GOOD—Chief Ritz admires today's DDs. Below: Chief took photo of USS *Decatur* (DD 5) in 1918.



the Four-Stacker Navy

were inch-thick pieces of wood that they nailed to the soles of their shoes.

"Call me Charlie, sonny.

"We pretty well managed to keep things together, though. Sometimes we used bailing wire—same as you did on a Model T."

SEVERAL TIMES, Charlie recalls, he had to get his ship underway alone. On one occasion, at Gibraltar during World War I, he had no help in the boiler and engine rooms because his men were all sick with the flu.

"I lighted the boilers, warmed the engines, passed coal and tended water for three days. When I came out on deck after that my eyes looked like two holes burned in a blanket. Then I came down with the flu."

The pitch and roll of the early destroyers, as Charlie describes it, was considerable. They rolled so much during typhoons in the China Sea that Charlie remembers seeing footprints on the bulkheads.

The heavy seas didn't upset Charlie. "I only got seasick once—and then deliberately—to collect a \$14 bet that I could."

The armament of the early DDs consisted of two 3-inch guns, five six-pounders and two 18-inch torpedo tubes.

"The torpedoes were the most effective weapons. Of course, we had to be careful. Sometimes our torpedoes presented more of a hazard to us than the enemy. The darn things

would circle and come back at us in boomerang fashion."

Charlie was on board *Chauncey* in November 1917, when she collided with the British transport *HMS Rose*. Both ships were on convoy, cruising with lights out, and collided shortly after midnight. Twenty-five men were killed.

"Fortunately for me, I was not in my bunk at the time. It was cut in two by the bow of that ship."

CHARLIE REMEMBERS some of the reforms of Josephus Daniels, Secretary of the Navy from 1913 to 1921.

He noted that Secretary Daniels improved the training of enlisted men. "But there were no Fancy Dan schools when I went through boot camp at Goat Hill in San Francisco Bay. We learned to be Navymen on the job."

Charlie had some firsts to report.

He served on board one of the first destroyers that developed refueling at sea.

He saw Eugene Ely land the first aircraft on a ship (1911).

He witnessed the first seaplane flight out of San Diego harbor in 1912.

And he served on board *uss Sumner* (DD 333), the first ship to win the red battle efficiency "E" two years running.

"I served on board *Bainbridge* until August 1918. She was tired and worn and had lost her kick. She could



BACK THEN—The old-timer looked like this when serving as chief water tender in *USS Bainbridge*.

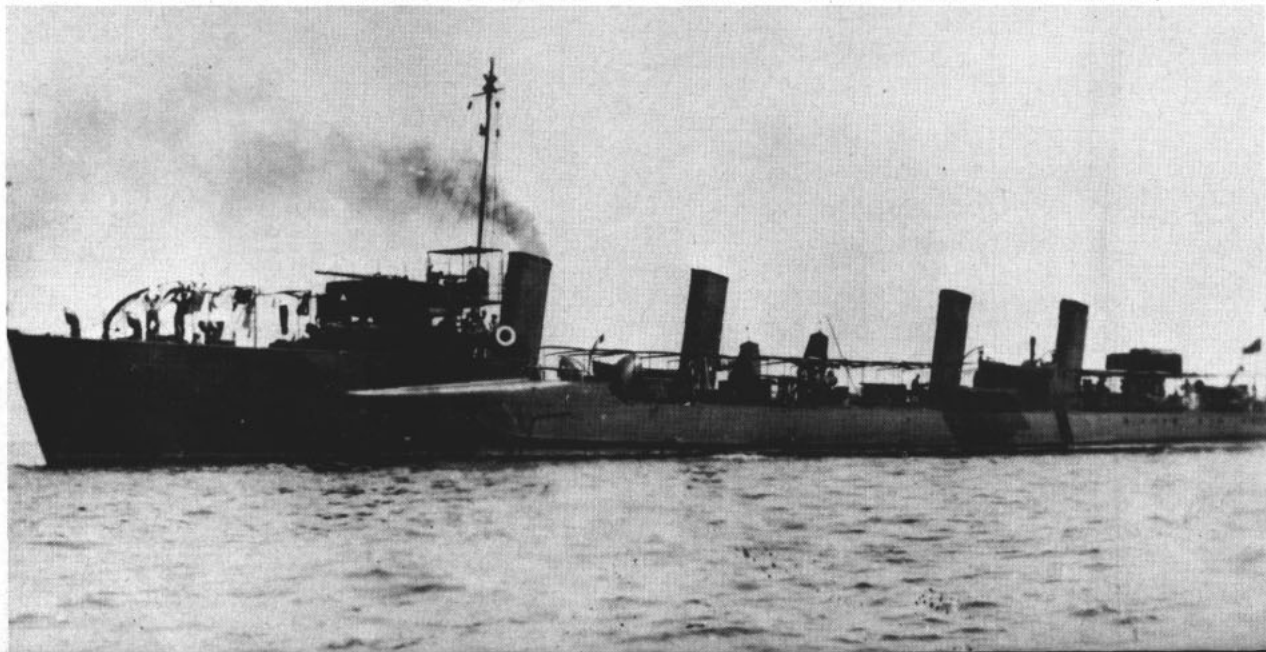
do only half her original 29 knots.

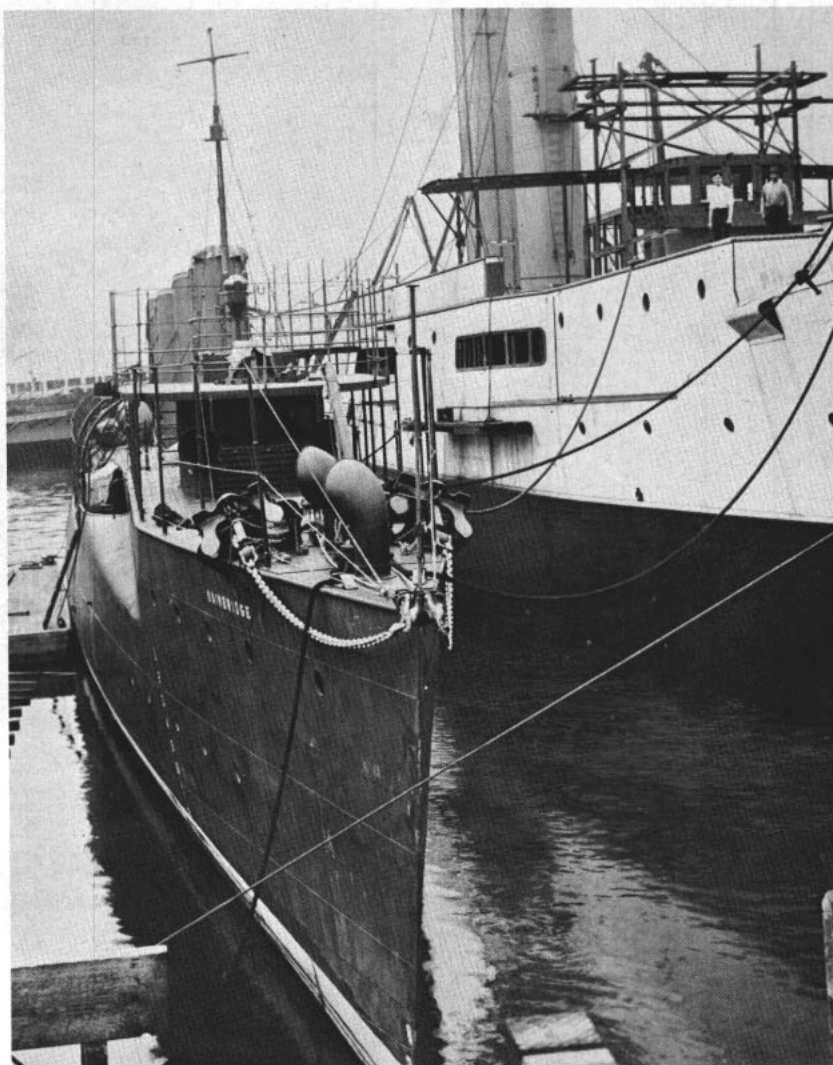
"I don't like to talk about the dear old lady, but she honestly couldn't do much. Her boilers were old and tired and we couldn't make much speed.

"We couldn't have caught a sub if we'd gotten up and taken off."

Bainbridge was quietly retired on 3 Jul 1919. Seven years later the hot, damp conditions of the boiler and engine rooms under which Charlie had worked for so long finally resulted in severe bronchitis and his retirement.

SOME CHANGES have been made in greyhounds since Chief Ritz served on board *USS Chauncey* (DD 3).





FUNNEL FIRE, says Chief Ritz, made DD 1 (above) a dandy target at night.

CHARLIE RITZ was born in a small farmhouse in Neosho County, located in southeastern Kansas.

"I was a skinny, 20-year-old clodhopper when I joined the Navy. I wanted to travel. The only world I

had seen was the countryside between our farm and a gold smelter in Colorado."

Charlie's Navy life took him to more than 25 foreign countries.

He ate oysters from tree roots in the Philippines, searched for ebony wood in China, nearly caused a riot in India when he forgot that certain cows are sacred, and toured the Egyptian pyramids.

In 1920, Charlie was married. "Those were the days when a chief made \$55 a month and left his wife put."

After his retirement, Charlie and his wife Lillian settled in San Diego. For 20 years Charlie worked for a power and light company.

When World War II got underway, Charlie tried to re-enter the Navy.

"I tried four times to get back in. Guess they thought I was too old, or sick, or something."

As an alternative wartime effort, Charlie served in Civil Defense as a first aid instructor and auxiliary policeman. "I worked nearly every night of the week. I was pretty tired when it was all over."

In 1946 Charlie and Lillian started building an adobe home on a sloping ridge at Valley Center, Calif., 60 miles northeast of San Diego. "I made the bricks myself. It took us almost four years to complete construction."

These days, Charlie, now 72, frequently visits San Diego to see the "more shapely workhorses of the Fleet." He likes what he sees.

"I'd go back in today if they'd let me."

Charlie still keeps step with the Navy, and still wears regulation shoes

TALES APLENTY—CPO Ritz chats during meal. Rt: DD of Charlie's day hits storm going over in WW I.





PACFLEET students are permitted inside out-of-bounds safety circle as they check on procedures for manning Navy's 40-mm AA gun.



GUNNERY director is given work-out in practice session at school.

U.S. Fleet Gunnery School

GUNNERY IS NOT a forgotten art in today's guided missile Navy. The U. S. Fleet Gunnery School, San Diego Calif., offers 33 regularly scheduled courses and trains an average of 1200 officers and 14,000 enlisted men each year.

The 73 instructors at the school represent nearly 1500 years of ordnance experience, covering every type of gunnery system in the Fleet.

Courses fall into three categories: Team training; maintenance training; and officer courses that provide the theory and practice necessary to qualify young officers for shipboard gunnery department assignments.

One of the team training courses taken most frequently is a one-day offering in which shipboard equipment is used. Simulated electronic air targets are inter-connected with gunnery and fire control equipment. The gunnery officer chooses the most dangerous target. Then the fire control radar operators work to "acquire" the target, the men on the computers determine course, speed and altitude, and the gun crews load and fire dummy powder projectiles. Between 60 and 100 target runs are usually made during the one-day course.

Technical and maintenance courses usually last two weeks. They are planned for the student who already has a certain technical background, gained in either a basic school or through shipboard experience, or both.

A minimum of theory and the maximum of practical experience is the rule of thumb for these courses. Emphasis is placed on assembly and

disassembly, adjustment, and casualty troubleshooting.

The school offers an eight-week gunnery officer course that provides instruction on every gun and control system in the Fleet. This course is specifically tailored to qualify shipboard officers for gunnery department responsibilities. The first six weeks are filled with classwork and drills, using actual equipment. The seventh week is spent at sea aboard a destroyer undergoing gunnery exercises. During the exercises, students are rotated into every position from control officer to computer operator.

In the eighth week the students return to the classroom and compile the previous week's firing data.

Because a ship's operating schedule does not always allow an officer to be absent for eight weeks, four one-week courses are also available.

In addition to regularly scheduled courses, the gunnery school furnishes

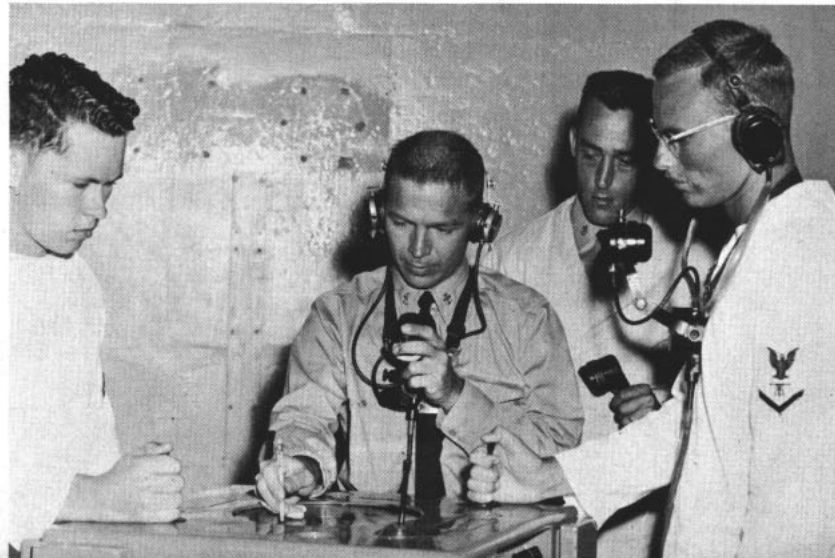
advice and assistance to ships with gunnery problems.

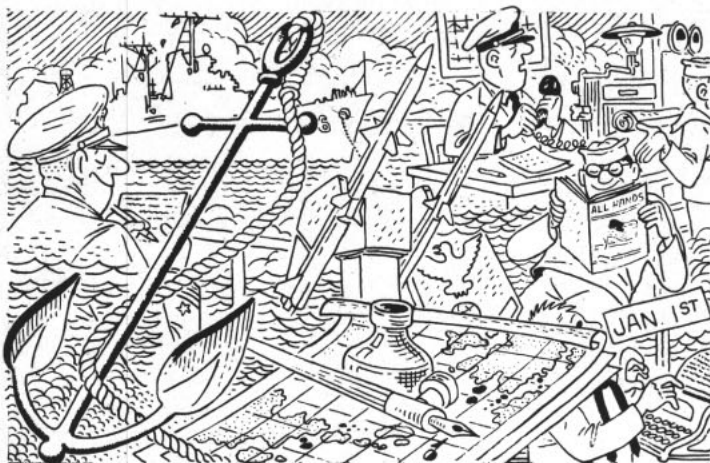
A gunnery training assistance team, comprised of one officer and four enlisted instructors, has been formed to offer assistance to any ship on specific gunnery problems or provide an appraisal of the over-all gunnery situation aboard.

The team goes aboard and evaluates a ship's gunnery department, then reports its findings to the gunnery officer. Later a follow-up letter is written to the ship's commanding officer with recommendations for specific training and assistance offered by the school.

Coast Guardsmen and Marines, as well as U. S. Navymen and those from foreign allied nations, are trained at the gunnery school.

HERE'S HOW — Actual shipboard gear helps to train gunnery students.





NAVY NEW

AS SOME OF OUR more acute regular readers may have noticed, ALL HANDS has within recent years encouraged the submission of New Year's logs for publication in January of the following year.

For the benefit of others, it might be explained that

USS Yosemite (AD 19)

'Tis the first of the New Year,
The bright sixty-two;
We're tied up in Newport,
The same old pier two!
With standard lines doubled
And breast lines midships,
We eyeball the work load,
With our hands on our hips.
Port chain to the pier
Is just making sure
The ship will stay here
At least one more tour.
Alongside to starboard,
Not up in the hills,
The Sherman, the Courtney,
Hammerburg and Mills.
Some power from the pier,
The rest from below.
Numbers 3 and 4 jennys,
Number Four Boiler for show.
As SOPA, on board,
Our old friend DESLANT.
The boss of the horde
That will not say can't.
Were settled down here,
With condition Yoke set.
Another full year
Of the best you can get.

—N. V. Fowler, Jr., LT, USN.

USS Henrico (APA 45)

Here we are in the "Happy Hank,"
Loaded with men of every rank;
Moored to pier 10 that's built like
a tank.
In Yokosuka.
Our starboard side is moored today
With six strong lines and two
springlay;
This prevents us from getting away
From Yokosuka.
We're taking services from the pier
To top us off for the coming year;
I'm afraid that's water, Bos'n, not
beer,
In Yokosuka.
Number One Boiler is on the line;
Generator two is doing just fine,

The way they do it all the time,
At Yokosuka.
We have Yoke set and Readiness IV;
The engineroom requires no more
Than four hours' notice to leave the
shore
Of Yokosuka.
Among many ships of the U. S. Fleet
Present with decorations replete,
Oklahoma City carries COMSEVENTH-
FLEET,
SOPA, Yokosuka.
Embarked this vessel, and in his rack,
Is Commodore Bullen, COMPHIB-
GRUWESTPAC;
He's our leader; he keeps us on track
In Yokosuka.

—Forrest E. Leamons, USN

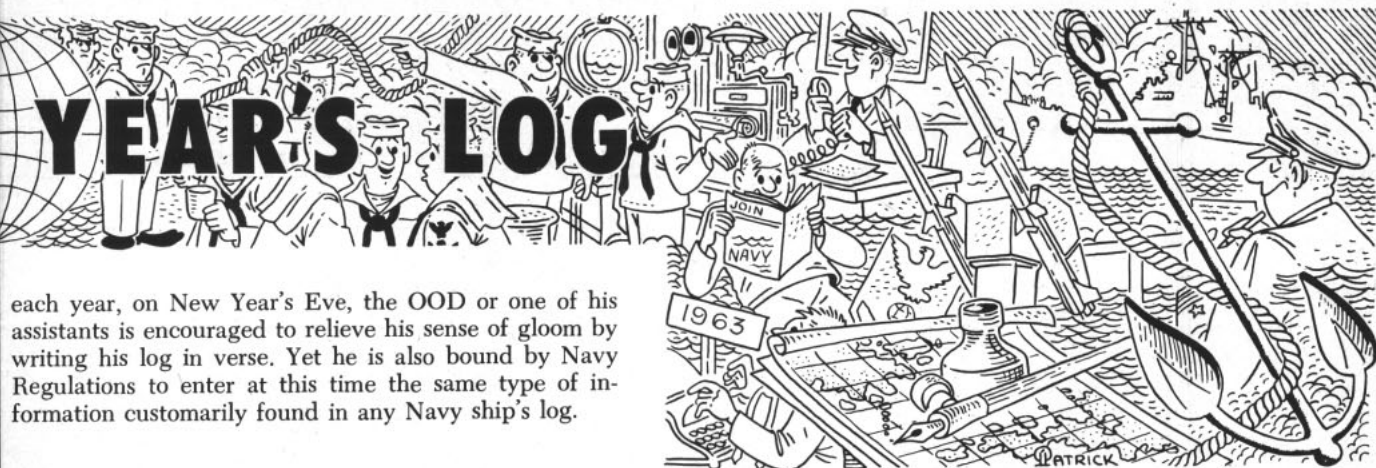
USS New (DDE 818)

The night is clear, the air is cold;
In creeps the New Year, out slips
the old.
At DESSUB Piers, a mighty squadron
rests.
Shenandoah is our mother dear,
Nestled at her side we have no
fear.
All lines are doubled, both fore and
aft;
Alert quarterdeck watch on every
craft.
Owens and Rich—Holder and New,
The names we bear, unknown but
to few.
Antisub warfare is our primary task;
We'll tell who's best, if one should
ask.
Condition X-Ray through the ship
is set;
Security reports no fear we'll get
wet.
From mother tender comes our steam,
Winding across the friends on our
beam.
Ships here include units of Atlantic
Fleet,
At Norfolk, Va., when not off on
their beat.

District and yard craft hover nearby;
If alarm is sounded, to their tasks
they will fly.
SOPA with us—he's the very best,
Is COMASWFORLANT and his mind
is at rest,
In an instant's notice he knows we'll
respond
To any task he sets us upon.
Now it's time to close, my relief is
in sight;
There remains one more duty to
perform on this night:
To bid from us—the good ship New,
A Happy New Year—to all of you.
—John A. Smith, ENS, USN.

USS Magoffin (APA 199)

As New Year's came, the horns they
blew;
And here we are, moored starboard
side to.
Beside the Renville we are at rest,
Doubled standard mooring lines—
they're the best.
To insure that our crew in safety may
slumber,
We've a wire preventer aft—one
in number.
The past year was our time to roam;
Now we call USNS, Pier 4, San
Diego, our home.
Missing are noises usually prevalent;
Our ship rests on cold iron, is bliss-
fully silent.
All our services come from the pier:
Fresh and salt water, power, steam
—but no cheer.
A phone we have so our men can call;
To let us know they are having a
ball.
All around are our sisters of the Pacific
Fleet;
District and yard craft too, in
formations neat.
SOPA, COMNAVAIRPAC, North Island,
sends greetings to all,
And wishes our troubles this year
will be small.



each year, on New Year's Eve, the OOD or one of his assistants is encouraged to relieve his sense of gloom by writing his log in verse. Yet he is also bound by Navy Regulations to enter at this time the same type of information customarily found in any Navy ship's log.

*We in Magoffin hope that the New Year will bring
Peace to the world—now let the bells ring.*

—J. H. Cale, EMC, USN.

USS Seminole (AKA 104)

*Moored fore and aft to buoys in the bay,
In San Diego, Cal., we welcome this day.
Our port anchor chain leads to buoy 41;
To it for our safety, sixteen fathoms are run.
Back aft we're held to buoy forty-two;
With two lengths of wire that will surely do.
During this time of peace and rest,
Number VI is our state of Readiness.
Watertight integrity is, of course, no bet,
So Modified Yoke is the condition we've set.
Number Two Boiler spews forth its wealth
To provide for our comfort and also our health.
Our Number One generator pours out its power
To fulfill our needs from fantail to bower.
Other ships present here in the bay
Traverse the Pacific to ports far away.*

*SOPA's at North Island, he's COMNAV-AIRPAC;
Great responsibility rests on his mighty back.
With quiet in the bay, all watches are posted;
This leaves but one group yet to be toasted.
To all our mates, both aboard and away,
Best wishes to all on this New Year's day!*

*Before we close the first log of the year,
There is one more verse we would have you hear.*

*Our prayers we tender, for those we hold dear,
In hope they'll be answered with peace in this year.*

—R. H. Holt, ENS, USNR.

USS Tweedy (DE 532)

*The time is just one second past
The old year on the clock.
We're moored now in a nest of ships
On the north side of our dock.
We're at the U. S. Naval Base
On Narragansett Bay,
And Newport is the city's name
Up old Rhode Island way.
Our mooring lines are standard size
For DEs in the Fleet.
Our berth is number one three five.
It's one that's really neat.
Within this nest are six fine ships,
All resting in their place.
The government which owns them all
Is our United States.
The first ship is Arcadia,
The AD twenty-three,
And all the rest from two through six
Are classified DE.
Coates, who's next, shows six eight five,
Then Woodson, three five nine,
And Loeser, bearing six eight zero,
In the bow lights shine.
The next ship is the Tweedy,
Our own fine ship, it's true;
The number showing on her hull—
Five hundred thirty-two.
The last one is the two eighteen.
The Darby is her name,
And all these ships somewhere have gained
Some glory or some fame.
Throughout our ship we're modified
And set condition Yoke.*

*It's one thing we must not forget
It helps us stay afloat.*

There's one thing more that we must add;

It's something we all know.

*Our SOPA here is COMDESLANT;
This entry we must show.*

*This writing we do here conclude;
It's finished now and done,*

*But out of all these ships we think
We have the greatest one.*

*Before we part and bid adieu,
Before the morning's light,
We bow our heads in prayer for peace*

And wish you a New Year bright.

—J. L. Burton, LT, USNR.

Staff, ComCruDesFlot Three

*The midnight bells ring loud and clear
As I with envy bend my ear
Toward raucous sounds of wassail's due
That herald for us a year brand new.
Steel decks are cold unto my feet.
Bryce Canyon, tender of the Fleet,
Contains the Flag, CRUDESFLT Three,
Rear Admiral Kauffman, presently.
The Long Beach Naval Station mole
Has berths aplenty I've been told.
At pier fifteen we brave the tide
With four destroyers by our side.
To port, what an impressive view;
The lights of DESDIV One Nine Two.
Reciting names, there are none I lack
Pritchett, Cowell, Trathen, Black.
COMMINPAC at Terminal Isle
Has been SOPA all the while,
Rear Admiral Veth, perhaps abed
Wears this laurel on his head.
The coffee's mud, my smokes are gone
And I, though sleepy, linger on.
This watch I stand in order to
Wish a glad new year for you.*

—C. L. Laning, LTJG, USN.

LETTERS TO THE EDITOR

Saluting the National Ensign

SIR: Art. 2108, para. 1, *Navy Regulations*, states in part: "Each person in the naval service, upon coming on board a ship of the Navy, shall salute the National Ensign if it is flying."

Naval customs and traditions hold that the quarterdeck and officer of the deck shall be saluted when coming on board.

My interpretation is that if the Ensign is flying, both the officer of the deck and the Ensign should be saluted, but that if it is not flying, only the officer of the deck should be saluted.

A shipmate's interpretation is that since *Navy Regulations* do not specifically prohibit the tradition of always saluting twice, this custom should be adhered to, regardless of the hour.

Which is the correct interpretation?
—R.F.S., QMC, USN.

• *First, a little background, Chief.*

The 1920 edition of "*Navy Regulations*" (Art. 265) required all officers and men, each time they reached the quarterdeck, whether from a boat, a gangway, from the shore or from another part of the ship, to salute the National Ensign. If the Ensign were not hoisted, then this salute was to be rendered only when leaving or coming on board ship. After the salute to the Ensign, the of-

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icer of the deck was to be saluted, and he was required to return both salutes. However, this has been changed.

Art. 2108, "*U. S. Navy Regulations*," 1948, requires persons in the naval service coming on board a ship of the Navy, to salute the National Ensign if it is flying, after which a salute is rendered to the officer of the deck. In contrast to the earlier edition of "*Navy Regulations*," no requirement for saluting when the Ensign is not hoisted is contained in the 1948 "*Navy Regulations*." —Ed.

The LDO Program

SIR: After reading and rereading articles pertaining to the LDO(T) program in Navy instructions, the *BuPers Manual* and various laws, I am still confused on certain points. Other LDOs I have talked with seem equally confused. Can you help us by answering these questions?

A CPO is appointed to LDO(T) ENS after 12 years' enlisted service. Upon completion of 20 years' service, while serving as a temporary LT, he reverts to CPO and enters the Fleet Reserve. When he has completed 30 years' active and inactive service, does the present law provide for him to be promoted to the rank of LT on the retired list?

How about a CPO with 23 years' enlisted service who is appointed to LDO(T) LTJG? He fulfills his three-year contract and, while serving as a temporary LT with 26 years' service, reverts to CPO and enters the Fleet Reserve. Can he be promoted to LT on the retired list after he completes 30 years' service?

A WO1(T) is appointed to LDO(T) LTJG and is passed over twice for promotion to LT. If he chooses to revert, will he be reverted to the warrant rank originally held, to the warrant rank he would have held had he remained warrant, or to his permanent enlisted rate? —J.A.H., LTJG, USN.

• *We don't know whether this will end your confusion or not, but here are the answers to your questions.*

An LDO(T) who reverts to his perma-

nent enlisted grade after 20 years and enters the Fleet Reserve, can be advanced to his commissioned rank on the retired list after 30 years' active and inactive service combined, if the Secretary of the Navy determines he held his commissioned grade satisfactorily.

This also applies to the CPO with 23 years' enlisted service who is appointed to LDO(T) LTJG and serves three more years before entering the Fleet Reserve as a CPO.

Finally, an LDO(T) LTJG who fails to be selected for LT and who has previously been a WO1 would revert to his permanent enlisted rate. —Ed.

Medal Wearing

SIR: After a lively discussion on the proper way to wear medals, a group of my shipmates and I don't seem to be able to agree on the correct interpretation of Art. 1031 (1) of *Uniform Regulations*. Could you help us by answering these questions?

Must five medals be worn overlapping on one bar or may they be worn side-by-side in two rows with two medals on top and three on the bottom?

How are seven medals worn? Eight?
—R. C. P., DT2, USN.

• *It's really quite simple.*

Five medals should be worn overlapping on a single bar. Additional bars are not used unless more than five medals are worn. Six medals would be

Wearing of "E's"

SIR: USS *Newport News* (CA 148) was awarded both the battle efficiency "E" and the green "E" for efficiency in operations. May crew members in the operations department wear both "E's" on the uniform? I have consulted several publications and have been unable to come up with a satisfactory answer. —W.S.B., LTJG, USN.

• *This seems to be a matter of continuing confusion. Only one "E" is authorized for wear on the Navy uniform. Thus, the "E" may represent either a battle efficiency award or a departmental proficiency award, or both. The "E" should be white for wear on blue uniforms and blue for wear on khaki, white and aviation green working uniforms. Other colors or letters are not authorized. However, men of a ship which wins the battle efficiency "E" for five consecutive years are authorized to wear a gold "E." —Ed.*

Rate Change Under SCORE

SIR: A shipmate and I are both in critical rates. We're wondering if it might be possible for us to be eligible for some of the benefits of the SCORE program.

Is it possible, for example, for a radioman in pay grade E-5 or E-6 (both critical rates) to reenlist under SCORE for conversion to communications technician (another critical rating)? Or, might electronics technicians in the same pay grades (critical rates) convert under SCORE to aviation electronics technician (also critical)?

A number of our friends contend that only personnel in non-critical ratings can take advantage of the excellent opportunities available under the SCORE program. —G.G.H., USN.

• *Your friends are right in the vast majority of cases—conversions under SCORE from one critical rating to another are not generally approved.*

The purpose of the SCORE program is to provide input to critical ratings from the overmanned ratings. Critical to critical would be an unwise expenditure of funds. —Ed.

worn side-by-side in two rows of three apiece.

Seven medals should be worn overlapping in two rows with four in the bottom row and three in the top one.

If you rate eight medals, you should wear two rows of four each, overlapping.

In all cases in which two or more rows of medals are called for and there must be fewer medals in one row than in the others, the short row should be centered above the full rows.—Ed.

Discharged or Separated?

SIR: I'm confused, and, frankly, a little embarrassed. As a personnelman I'm familiar with the manuals and directives that contain the official word, but I don't know whether I'll be "discharged" or "separated" when my present tour of duty expires. Perhaps you can tell me.

I'm on overseas shore duty and will soon be transferred to a separation activity in the continental U. S. When I arrive at the separation activity I'll be less than three months shy of completing the six years of day-to-day military service for which I am obligated.

BuPers Manual (Art. C-10317) indicates I can be discharged only after completing my six years of obligated service. Does this mean I must wait at the separation activity for three months before I'm discharged? Or will I be "separated" immediately—three months before my six-year obligation has been fulfilled? — V.L.F., PN3, USN.

• The answer to both questions is no. With less than three months to go, you would be eligible for discharge immediately upon arrival at the separation activity. If you had more than three months' obligated service remaining, you would probably be "separated" from your active duty status and placed in the Reserves. Later, when your service obligation has been met you'd be discharged. — Ed.

Was That My Ship?

SIR: I would appreciate it if you identified the destroyer in the photograph which appeared on page 15 of your September issue.

It has the same silhouette as my old ship, USS *Maury* (DD 401), and the scene is reminiscent of an action we had in 1944, although the exact location escapes me now.

An APD (possibly concealed in the photograph by the AA bursts and smoke) about 800 yards off *Maury's* after starboard quarter started a fire on this low-flying bomber.

Evidently realizing he was doomed the pilot tried a suicide run on *Maury*, coming in straight for our fantail.

The gun captain on number four mount (a BM2 named Massey) secured his gun crew but remained on station himself, taking shelter by laying his head down on the breach of number four five-inch.

Mount three secured at the same time, totally evacuating the mount. The gun captains on the two after 20-mms (located on secondary conn) also secured their gun crews but remained on station themselves.

These two men waited until the kamikaze was at point-blank range and each of them fired a full magazine of 20s into the cockpit and engine, causing the plane to crash and explode about 50 yards aft and a bit to the port side of *Maury's* fantail.

When the plane crashed and exploded a piece of the engine manifold landed about two feet from me between the two port torpedo mounts. In the excitement, I threw this piece of metal over the side never thinking at the time what a wonderful souvenir it would have made.

I feel certain that quite a few of us in *Maury* that day owe our lives to those two men on the after 20s. They later received the Bronze Star and, I believe, were promoted for this action

but we all thought they rated more. — William J. Lynch, HMC, USN.

SIR: In the first week of January 1945 *Maury* was part of a screen for a jeep carrier force en route south of Luzon toward Lingayen Gulf to provide air cover for the landings.

The formation was jumped by Japanese aircraft—I think there were three—approaching low on the water directly toward *Maury*. The ship astern got one of them. I lost sight of the second and the third bore in smoking from *Maury's* 5-inch fire.

The pilot saw he couldn't make it to the carrier, so he tried to crash *Maury*. He probably would have made it but for a very brave 20-mm gunner who scored hit after hit as the blazing plane came straight at him. It splashed just a few yards off *Maury's* port quarter in the position shown in your photograph. — CDR Donald J. Moe, USNR.

SIR: USS *Ralph Talbot* (DD 390) shot down an enemy plane in the Sulu Sea on 15 Dec 1944 in an action that looked very much like that pictured on page 15 of your September issue.

Was *Talbot* the ship in the picture? — D. H. MacHaffie, CTC, USN.

• Unfortunately for latter-day editors, most action shots taken during World War II were captioned simply "somewhere in the . . . , sometime."

The caption on this photo was unusually enlightening, for it went so far as to say "End of a Jap Dive Bomber—With the air filled with smoke and bursts of antiaircraft fire from American guns, a Japanese dive bomber crashes into the sea astern of the destroyer that brought it down. Note the aircraft carrier at the right of the photo. This action took place December 15, south of Luzon in the Philippines."

Anyhow, thanks for your sidelights on the subject matter. Perhaps now someone can identify the ship. — Ed.

CAN YOU IDENTIFY this U. S. destroyer, shooting down an enemy plane during action south of Luzon on 15 Dec 1944? The crippled Japanese dive bomber crashes into the sea close astern of the ship that brought it down.





SIXTH FLEET-bound USS Farragut (DLG 6) and USS Luce (DLG 7) provide backdrop for pre-deployment inspection held at Mayport, Fla.

Tactical Data Systems School

SIR: I'd appreciate any information you might pass along concerning the NTDS School.—B. B., ETR2, USN.

• The Naval Tactical Data Systems school is located at the Mare Island Naval Shipyard, Vallejo, Calif. Students are trained to operate and maintain the NTDS equipment (composed of transistorized computers, pictorial displays and digital communications gear) that is now being installed in combat ships.

Courses available at NTDS school are as follows: Systems Technician, 49 weeks; Computer-Peripheral Maintenance, 43 weeks; Display Maintenance, 36 weeks; Data Transmission Maintenance, 36 weeks.

The course you take (one course per student) is determined after you enroll. Classes convene every 12 weeks.

Candidates for NTDS training must first have been graduated from either ET "A" or ET "B" school, or from DS "A" school, which, as of this writing, has not yet been established.

At present, only third and second class petty officers are being ordered to NTDS school.

Requests for NTDS training should be submitted to the Chief of Naval Personnel (Pers B2132) via normal command channels.—Ed.

Advancement Waiver for E-7

SIR: Can you tell me whether a chief advanced to E-7 in the last segment (January) of the advancement list is eligible for the August exam for E-8 three years and seven months later? Is there a waiver for persons in this situation?

The chief in question was advanced on 16 Jan 1959. The men advanced in the other segments of this examination (August 1958) were able to participate in the August 1962 examination for advancement. This chief will not be able to participate until the next examination (August 1963), because he did not

have sufficient time in grade.—C. T. G., YN2, USN.

• To include among those eligible for consideration for E-8 those E-7s whose date of promotion is 16 January would, in effect, be reducing their time in rate requirement from four years to three years, nine months. This is not considered desirable.—Ed.

Good Conduct Award

SIR: A Bulletin Board article in the June 1962 issue of ALL HANDS states that effective 1 Nov 1962, Navy men will have to serve four years instead of three to qualify for the Good Conduct award.

Does this apply only to those starting their service on or after 1 Nov 1962, or does it mean that those who have not served a full three years by that date must serve an additional year to qualify?

On 16 Apr 1963, with 21 years' continuous active duty, I had hoped to receive my seventh Good Conduct award. But since I'm due to be transferred to the Fleet Reserve in October 1963, I won't get the added star if an additional year is necessary between awards.—L.T.G., DTC, USN.

• We hope you haven't been too concerned over the date in question, because it should be 1 Nov 1963 instead of 1 Nov 1962. The error is ours. We're not sure just how we managed to substitute a "two" for a "three," but we are sure of this; you will be eligible, with regard to time, to receive your Good Conduct award on 16 Apr 1963.

Regarding your first question, Navy men who do not have three years' service completed by 1 Nov 1963 (not 1962) will have to serve four years before becoming eligible for the award.—Ed.

Seavey, Shorvey and You

SIR: In your March 1962 issue, I came across a letter from a chief radio-man (unnamed) on the subject of Seavey/Shorvey. I must say you really sat him on his haunches with the bare facts of his history.

I have some thoughts to express on the same subject, with the same attitude as that anonymous RMC.

I'm a YN2, on my seventh year of active duty. My home is San Francisco. My first experience with the Navy's rotation system of its enlisted members came in 1957, when I was transferred back to CONUS from Japan on Osvey. At that time, BuPers honored my preferences by successfully placing me in the area of my first choice. My enlistment expired during that tour, and, after some 30 days as a civilian, I decided to come back, having full knowledge of the many excellent opportunities our Navy has to offer a young man.

Upon reenlistment, my preferences were: DD-SFran; DD-LBeach; DD-Seattle; Japan; YN "B" School. Soon, I was in receipt of orders from EPDoLANT to Guantanamo Bay, Cuba. A miss is as good as a mile, I figure—at the time I understood the "needs of the service."

After my tour at Gitmo, I was once again picked up on the Osvey, and, I must admit, once again my preferences were honored. I received my first choice of duty—a destroyer homeported at Mayport, Fla.

Now it has come time for Seavey. My listed preferences were: SFran area; 12ND; 13ND; anywhere west of the Mississippi; YN "B" School. (That fourth choice, by the way, stemmed from your many warnings about not limiting preferences to any one locale where there might be an available billet.) I've just received my orders, and—guess what? They read, "FAU CINC-LANTFLT, Norfolk, Va., for duty."

How could they miss by such a wide margin? The needs of the service—again? Hardly. I simply cannot believe that there was no billet for a YN2 available anywhere west of the Mississippi. The way I figure it, EPDoLANT needed a yeoman in Norfolk so, at random and with complete disregard for individual duty preferences, they selected a card from their machines—and mine was the one. Another busy and successful day at EPDoLANT—but this time they have missed at the expense of my morale and career intentions.

I am well aware of the fact that I am not alone. Hundreds of hopeful sailors are sent anywhere and everywhere, except the place they want, during every Seavey period. Others, like myself, are caught, juggled around, and end up assigned to duty stations they particularly do not desire.

I cannot believe that the Seavey/Shorvey rotation system is in the best

interests of the Navyman, unless, of course, the Navyman has a buddy in the Bureau. Along with the chief radioman, for better or for worse, I'd much rather see a system better geared to the desires and best interests of the individual sailor—with, of course, the "needs of the service" given due consideration.

I'd be very much interested in any light you might be able to throw on this subject—but I certainly don't expect to find this letter in your magazine. — P. W. R., YN2, USN.

• Guess again.

Provided everyone passes his copy of ALL HANDS along to nine other readers, everybody in the Navy will get to see your letter—and the answer to it prepared by the Seavey assignment section in BuPers, and printed below. And, from a Navy which contains thousands and thousands of hard-working Navy-men who spend as much as four, six, eight and 10 years or more on continuous sea duty, we doubt very seriously if you'll get much sympathy.

Here's what the Seavey assignment people had to say:

"Following recruit training you were ordered to Japan for a tour of overseas shore duty—i.e., preferred sea duty. (Your letter voices no complaints yet.) Next you rotated to a tour of shore duty in the vicinity of your old home town, San Francisco. (Still no complaints.) Your enlistment expired while you were ashore, and you elected not to reenlist. This is where you claim the overhead fell in on you.

"Upon reenlisting, after 30 days as a civilian, you were available for assignment to sea. May we point out that this was not a Shore duty assignment? A man rotating under Shore duty receives maximum consideration of duty preferences. You were a "gendet" (general detail), available immediately, and were assigned to meet an immediate need, which, in your case, happened to be in the Atlantic Fleet. It is regretted that a gendet's duty preferences must receive low priority, in order that certain immediate shortages (resulting from honoring the majority of career enlisted duty preferences) may be filled.

"While on the subject of duty preferences—namely, yours for DDs San Francisco, Long Beach or Seattle; or Japan for sea duty—San Francisco and Seattle were more or less out because of the small number of billets available in either of those areas; Japan because you had a previous tour in the area. (Refer to "Enlisted Transfer Manual," Art. 2.21e, regarding overseas tours.) So, in reality, you gave one choice — Long Beach — which is limiting yourself, to say the least. At the time, there was no need for a YN in Long Beach or on the West Coast.

"Your listing a preference for YN "B" school and your disappointment in your failure to get it is astounding. Being a



NUMERICAL ORDER — Four Forrest Sherman class destroyers assigned to three different divisions are moored together in San Diego Bay.

YN you should be well versed in the contents of the "Enlisted Transfer Manual." Did you ever look at Chapter 12, Art. 12.3? If you had reenlisted for school, you would have gotten it. (Upon graduation, it would almost have been a certainty your ultimate assignment would have been in the Pacific Fleet.)

"Now, for your latest set of orders to FAU, CINCLANTFLT. There are quite a few YN billets available west of the Mississippi each month. However, there are many more billets east of the Missis-

issippi to be filled, owing to the mere location of shore activities. There are approximately the same number of YNs east as west on the Seavey, and in the past months there have been many more people desiring the West Coast, so now the problem of "position" or "standing" on the Seavey listing arises.

"As you can see, all cannot be assigned to area of choice. Your relative standing on the Seavey listing was low enough so that all West Coast billets were filled by the time the distributor got down the list to your name, so you were assigned by BuPers to a billet in the east, namely, FAU, CINCLANTFLT — a rather choice "career billet," by the way.

"There were actually only two choices in your case: One—assign you ashore in an area not of your choice where a vacancy existed, or two—give you a 14-month involuntary sea extension (in the Atlantic Fleet). The former possibility appeared to be the most desirable.

"If you feel your assignments under the foregoing circumstances were not fair, then apparently what you are looking for is not an assignment according to the Seavey, but a way to circumvent the system to your advantage."

We can't resist adding a couple of short postscripts to the above. Normally this magazine doesn't waste its time or its readers' time printing a gripe unless it's a good, and legitimate one. We have done so, in this case, merely to emphasize again that the Seavey/Shorvey system does, whenever and wherever possible, honor individual duty preferences, while still keeping all the billets throughout the world manned.

As for that "buddy in the Bureau" bit, we'd like to point out that most of the officers and enlisted Navy-men assigned to duty in this Bureau work within shouting distance of the Seavey/Shorvey detailers, and many are good friends of theirs (outside working hours)—yet the majority of them wind up with orders to shipboard-type sea duty when their tours at BuPers are over. — ED.

LDO Precedence

SIR: While attending the Limited Duty Officer's orientation course (3rd segment, year group 1960) at Newport, R. I., I received the impression that the LDO lineal numbers were determined by the final academic standing upon completion of the course.

If this is correct, and I finished 53rd in a class of 180, shouldn't there be 127 in the class who are junior to me? The Register of Commissioned and Warrant Officers, 1962 edition, lists only 37 as my juniors. — K.S.J., LTJG, USN.

• Owing to the decreasing number of LDO(T)s attending the indoctrination course, the method of using class standing to determine precedence was revised in March 1960. LDOs commissioned with the same date of rank are now given lineal numbers as follows: (1) Former commissioned warrant officers and warrant officers retain their relative precedence; (2) former enlisted men are assigned precedence junior to the former warrants, and then are assigned lineal numbers according to the merit given to the information obtained by the In-Service Procurement and Selection Board on their Briefing and Scoring form. In the event of a tie, previous enlisted rate and time in rate are used to determine seniority. — ED.

Clamagore's Crew Calls for Correction

SIR: For years we of *uss Clamagore* (SS 343) have endured a good deal of ribbing within Submarine Squadron Four, as despite our best efforts our ship continues to be referred to

Buck up—your predicament met with instant and sympathetic response here at ALL HANDS. One staffer, who has spent many futile years battling stubborn people who insist upon ad-



by press media as *uss Clamagore*.

This year after winning the Battle Efficiency "E" in our division for the fifth time in the 13 years the competition has been held, we were able to silence most of the jokesters by proudly pointing to the big E painted on our sail. Of course, it became somewhat of a hollow triumph when *ALL HANDS* (page 15, November 1962 issue) and other publications, in reporting our accomplishment, again listed us as *Clagamore*. We can hardly complain, however, since even the well-known *Jane's Fighting Ships* lists us incorrectly.

At any rate, we're willing to give it another try. I am enclosing a short story and sketch which tells the *Clamagore* story. Perhaps you can use it sometime. — S. Edwards, LT, USN.

P.S.—Incidentally, the picture we've enclosed was used in a Charleston, S. C., paper but—you guessed it—the first edition read *Clagamore*. — S.E.

• You might consider the solution finally arrived at by good old Joe Hogbristle, who petitioned successfully in court to have his name changed legally to Frank Hogbristle, because he was tired of people greeting him with "Hi Joe, whaddya know?"

dressing him as O'Connell long after he has identified himself in pure, pear-shaped tones and with perfect enunciation as McConnell, knows exactly how you feel.

He feels that you have every right to expect to be identified correctly, especially in Navy publications, and has dedicated himself to the cause of correcting this injustice. He counsels patience and forbearance, however, since he's sure you're well aware that an idea, especially a mistaken one, once implanted in people's minds is extremely difficult to eradicate.

Thus, irritating as it is, you will probably continue to be referred to on frequent occasions in the future as *Clamagore*, when all the while the idiots should know that it's really *Clagamore*—Oops, sorry, we, er, ah, heh heh, seem to have gotten a little confused for the moment here. Oh, the heck with it. You do have a problem. Other than that, though, how are things in *Clamagora*?

Incidentally—O'Connell wants to know if it's just possible that you've been wrong all along, and that the rest of the world is right? — Ed.

P.S.—See next month's *ALL HANDS* for "The Three Faces of *Clamagore*."

Locksmith Training

SIR: I am seeking information concerning locksmith training for two men on board my ship who have been working primarily as locksmiths for the past two years. They would like to attend any available locksmith school in order to further their knowledge in this field.

I've checked through the *Catalog of U. S. Naval Training Activities and Courses* (NavPers 91769-E), and all available BuPers Instructions, but can't find any word about a locksmith school. Is such a school available? If so, how can a quota be obtained? — R.M.M., PNCS, USN.

• A six-week course of locksmith instruction is available to men who serve in billets which require such qualifica-

tion. Ordinarily, only men in pay grade E-5 and above are eligible. Trainees must be in artificer ratings and must be cleared to handle Top Secret material. No specific convening dates have been established; classes are arranged on an individual basis. The quota is only three per class. Requests for locksmith training should be submitted via your chain of command to the Chief of Naval Personnel (Pers C-21). — Ed.

Placement of Ribbons

SIR: There is a controversy at my present duty station over the order in which I should wear my ribbons. About the only thing everyone agrees on is that my Good Conduct Ribbon rates number one placement.

Aside from the Good Conduct, I have

been awarded the following medals at the following times: World War II Victory, 1945; Army of Occupation, Germany, 1946; National Defense, 1951; Korean Campaign, 1953; United Nations, 1953, and China Service, Extended, 1957.

Most of the argument centers around the ranking of the China Service, Extended, medal and/or ribbon. I would appreciate a ruling on its placement, and also the reason it is so placed.

Also, if I become eligible for the Armed Forces Expeditionary Medal when the lists come out, what would be the proper order of its placement. I was aboard *uss Essex* (CVS 9, then CVA 9) at both Lebanon and Taiwan Strait.

I have also been told that a maximum of five large medals may be worn at any one time at full dress. If this is correct, which of mine should be so worn? — W.T.S., Jr., HM1, USN.

• "U. S. Navy Uniform Regulations" (NavPers 15665) (Rev. 1959) contains the information you seek. According to Arts. 1024 and 1025 of that publication, your ribbons and/or medals should be worn in the following order:

Good Conduct
World War II Victory
Army of Occupation, Germany
China Service, Extended
National Defense
Korean Campaign
United Nations

As new medals become authorized, their order of precedence is established by the Board of Decorations and Medals. The China Service Medal (1945-1957) and the Navy Occupation Service Medal are worn in the order earned, and before the National Defense Service Medal. If you become eligible for the Armed Forces Expeditionary Medal, it should be worn after your Korean Campaign Medal.

Art. 1031.2 states that all medals may be worn; however, a minimum of five must be worn by those possessing five or more. Normally, those of highest precedence are selected, although this is not mandatory. — Ed.

Hiss Act Change

SIR: A few years back there was considerable publicity about several test cases involving the so-called Hiss Act. At that time, many servicemen discovered that they would not be eligible for retired pay because of this law.

Just recently the legal officer at my station told me that the Hiss Act has since been amended so that servicemen, in most cases, are no longer affected by it. However, he could locate no reference to back up his statement. Unless there has been an amendment, I am not at all sure that retired pay will be available to many men who have been convicted by court-martial.

Could you furnish me some informa-

tion on the Act, its amendments (if any) and its present effect on service retirement? I would like to pass such information on to members of my squadron and also, incidentally, see it made known to other readers of ALL HANDS.—E. M. S., ADRC, USN.

• As originally enacted on 1 Sep 1954, the Hiss Act prohibited payment of retired or retainer pay to persons convicted of certain offenses against federal law, including felonies committed in the exercise of their authority, influence, power or privileges as officers or employees of the government. Thus, a Navyman who was convicted by court-martial of stealing government property, valued at more than \$50, which was in his care could not receive retired or retainer pay.

On 26 Sep 1961 the Hiss Act was amended by Public Law 87-299 to apply only to offenses of a loyalty/security nature, including treason, spying or disclosure of classified information.—Ed.

Sub HMs to Surface?

SIR: I recently heard some rumors which have my dander up. They are to the effect that nearly all hospital corpsmen who are qualified submariners are being taken off subs and assigned to other duty in order to make room for corpsmen graduating from the Submarine Medicine School.

If this is true, and I certainly hope it is not, I think it is very unfair to the men who have already spent a great deal of time and effort to become qualified in subs.

Most hospital corpsmen who are qualified in submarines are highly motivated for this duty and don't want to be sent to other ships or to the Marines.

I, of course, have an ulterior motive in writing this letter, because I am a dyed-in-the-wool submariner and I want my fears laid to rest. I hope you

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, ALL HANDS MAGAZINE, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• *uss Lexington (CV 2)*—A reunion of past crew members is planned for 27-30 June at the Doric Lemington Hotel, Oakland, Calif. Further details may be obtained from LCDR Walter Reed, usn (Ret.), 5608 Ocean View Dr., Oakland, Calif.

• *uss Wasp (CV 18)*—A reunion will be held on 22 March at Cliff Walk Manor, Newport, R. I., for those who

served on board between November 1943 and the end of World War II. For additional information, write to CWO W. T. Northrop, usn, NAVOCS, Bldg. 1805, Newport, R. I.

• *uss Jerauld (APA 173)*—A reunion is planned for those who served on board during World War II. For more details, write to Frank G. Sienkiewicz, 1270 Decatur St., Brooklyn 7, N. Y.

• *uss McCaffery (DDE 860)*—A reunion is being planned for all who served on board from October 1955 to September 1958. You may obtain additional information from Jerry Kuhr, YNSN, usn, 615 Avenue "L," Apt. 3R, Brooklyn 30, N. Y.

can do it.—R.E.V., HM1(SS), USN.

• *Relax. The situation isn't as bad as you've heard. There has been an excess of submarine trained hospital corpsmen in recent months and EPDOPAC and EPDOLANT, which have distributional control of these billets, may have assigned a few submarine corpsmen to surface ships.*

This, however, is not a general policy. Submarine trained hospital corpsmen are being encouraged to apply for the nuclear program, where there is a continuing requirement.

Newly trained men are being assigned to non-nuclear subs to become qualified submariners, but they are not replacing all the old-timers.—Ed.

More on Pittsburgh

SIR: In the June 1962 ALL HANDS letters section, reader E. J. A., YN1, inquired about an LST named *Pittsburgh* which visited the city of Pittsburgh, Pa., back in 1944. Seems that LSTs were not named until 1956.

In your editorial reply you suggested that a reader who was in Pittsburgh (the city) at the time might be able to help identify the LST.

I'm a native of Pittsburgh and I remember the visit although I was only 16 at the time. I don't recall the hull number of the LST. I have concluded the ship was named *Pittsburgh* on a temporary basis for her visit to win public support for a War Bond drive to collect the equivalent cost of an LST to be sponsored by the city.

The ship's well deck was fitted out as a jungle, complete with recorded bird calls and small arms fire. Dummy enemy troops were stalked by Marines from a detachment embarked.

Not only did the citizens of the Steel City subscribe sufficient bonds to finance the LST, they also financed a B-17 bomber for the Air Corps.—LT P. L. Gruendl, usn, Bridgeport, Conn.

• *Thanks to LT Gruendl, the mystery of an LST named Pittsburgh is apparently solved. Case is closed.*—Ed.

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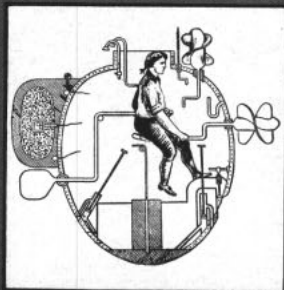
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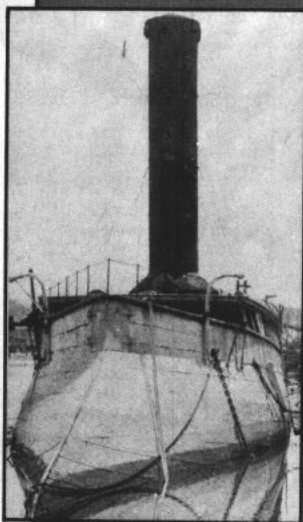
ODD BALL SHIPS



BUSHNELL'S TURTLE



**GEORGE WASHINGTON
PARKE CUSTIS**



U.S. TORPEDO RAM ALARM

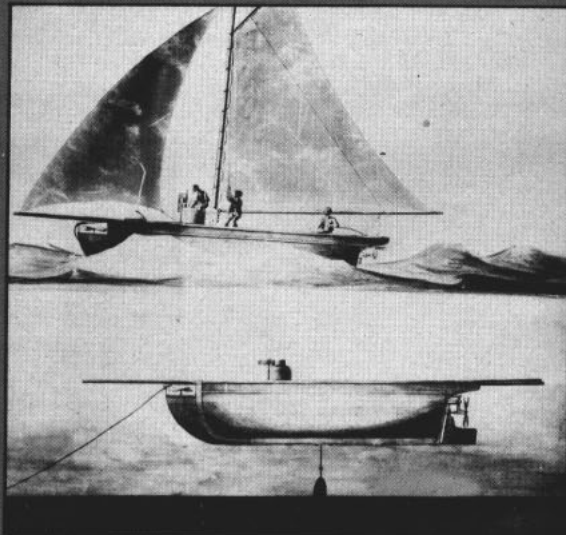
BUSHNELL'S TURTLE—Built in 1774 by 27-year-old David Bushnell, this one-man, tarred oak, hand-driven submersible had air for 30 minutes. Volunteer Sgt. Ezra Lee failed to blow up British flagship when *Turtle's* drill couldn't penetrate her copper hull.

GEORGE WASHINGTON PARKE CUSTIS—The world's first "flattop" carrier, in 1861, raised observation balloon *Washington* to search aerially for blockade runners. However, the Navy's pioneer aeronautical effort was discontinued.

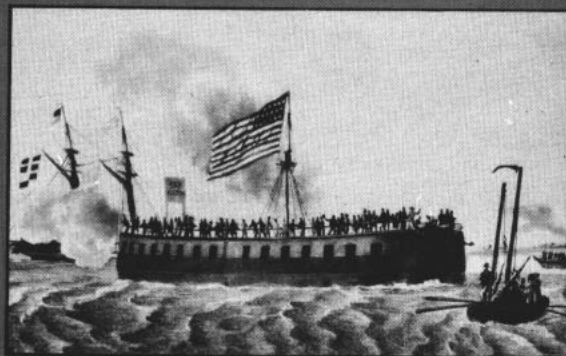
NAUTILUS—Built in Paris in 1801 by Robert Fulton when he failed to get backing in America, this 21-foot submarine sailed on the surface, was hand-propelled under water. Rejected by Napoleon and then the British, the undersea project was abandoned when Fulton failed to penetrate protective belt of netting on U.S. target ship *Argus* with a torpedo, lost chance for support of the Navy.

U.S. TORPEDO RAM ALARM—This 800-ton, three spar-torpedo vessel of 1870's was 172 feet long (including her 32-foot ram). Double-hulled, iron plated, she had a tackle and winch-controlled bow torpedo, two 18-foot side-spars for sidesweeping, electric lights, rapid fire guns. Fowler Wheel (see photo), a horizontally feathering paddle wheel, and hard-to-manuever long bow were weak features.

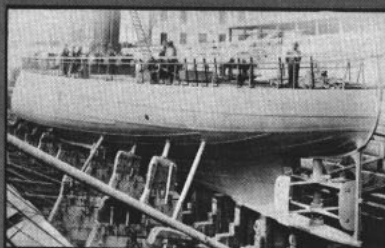
INTELLIGENT WHALE—Launched by the Navy at the end of the Civil War, this 18-man, hand-powered submarine featured an air lock which permitted a deep-sea diver to fasten a bomb to the target ship. Trials in 1872 ended in disaster, caused Navy to halt submarine activity temporarily.



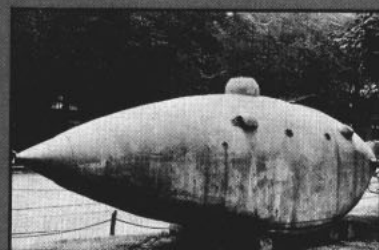
NAUTILUS

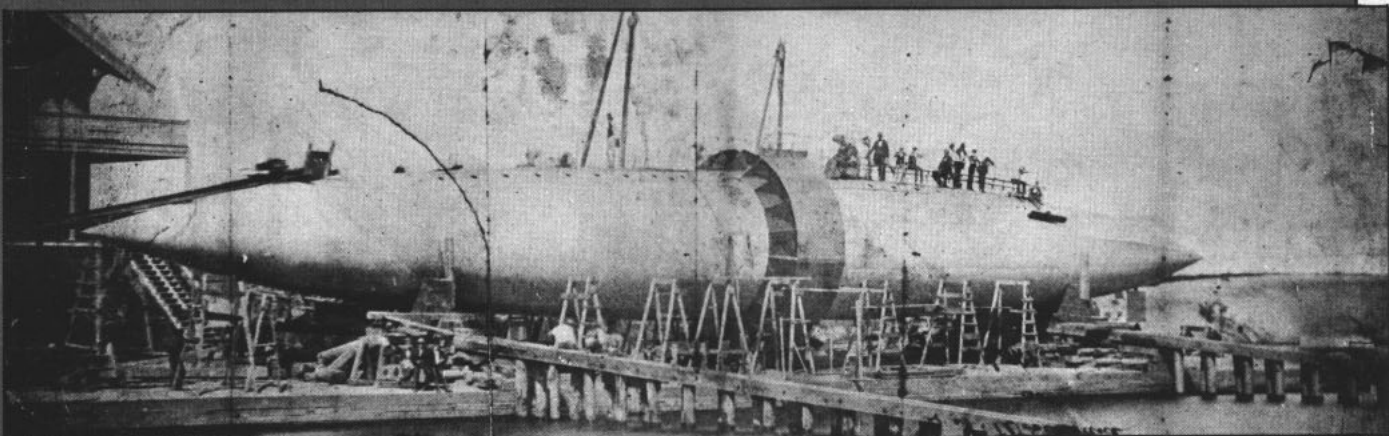


DEMOLOGOS ("Voice of the People")—Designed by Robert Fulton and launched in New York in 1814, this 156-foot "steam floating battery" (later renamed *Fulton*) did 5 knots driven by the 16-foot paddle wheel set amidships in a channel way between her catamaran-like twin hulls. Five-foot-thick timbers protected the men at her 32-pounders (which fired heated shot) and her two undersea "submarine" guns. Spies told of mechanical lances and hoses that threw streams of scalding water. Not completed until after war, she was destroyed in an accidental explosion.



INTELLIGENT WHALE





WINAN'S IRON STEAMER—Looking like a modern-day atomic submarine, this 180-foot "cigar ship" displaced 350 tons. Steered by rudders at either end, this merchant ship had four engines, driven by a flanged ring which circled her amidships. Designed to operate semi-submerged, she carried 20 passengers to England in 1859.



ALLIGATOR

ALLIGATOR—Designed in 1861 by French engineer De Villeroi to blow up *Merrimac*, this steel-plated, 47-foot submarine was powered by "an absurd arrangement of handworked duckfoot paddles" which "opened and shut like a book." A lime chamber and oxygen machine produced air for the 16-man crew. She was abandoned in a storm off Virginia without having seen action.

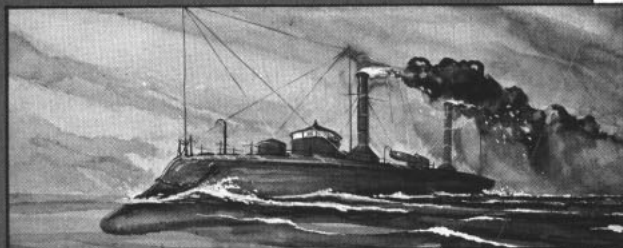
SPUYTEN DUYVIL—This Navy semi-submersible armored torpedo boat, designed to wade into action with her decks awash, featured a bow tube through which a spar torpedo was thrust like a javelin. She was built in 1865.

FLIP—This 355-foot, 600-ton Floating Instrument Platform of today's Navy can flip from horizontal to vertical position, providing a stable platform needed for oceanographic research, particularly in rough seas. Two tubes permit crew of four to descend 150 feet below surface.

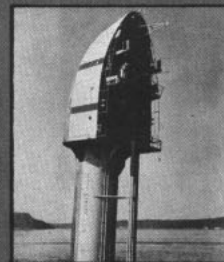
CHOCTAW—Built in 1862, this 1000-ton monster ironclad carried three 11-inch guns, two 30-pound rifles, two howitzers. Her side wheels worked independently, could turn her on a dime.

ONONDAGA—This double-turret, 1250-ton, Civil War monitor, called the "Sea Elephant," appears unusual today. Packing two 150-pounder Parrotts, two Dahlgren guns, she helped make possible the capture of Petersburg.

USS WOLVERINE (IX 64)—This coal-burning, steam-driven, paddle-wheeled aircraft carrier had no armament; was little more than a hull with a flight deck. A converted passenger ship, she was used for Navy carrier pilot training in 1942.

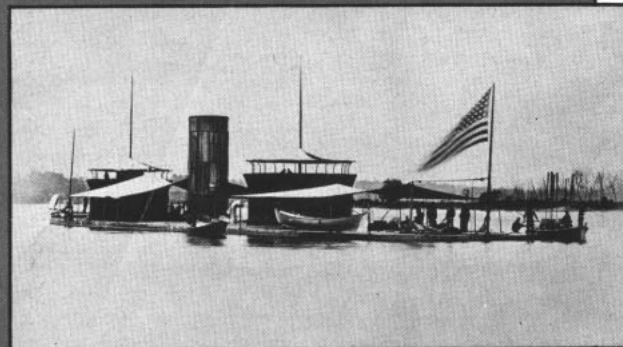
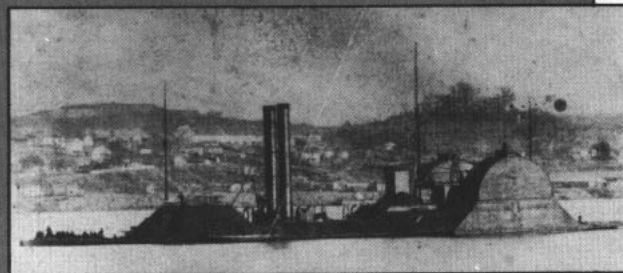


SPUYTEN DUYVIL



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USS WOLVERINE

★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★



CONVERTED' liberty launch from USS *Franklin D. Roosevelt* (CVA 42) is presented for inspection to real USS *Enterprise* (CVAN 65) in Med.

Subs Have Weighty Problems

Plenty of good food and too little space to work off excess poundage have resulted in something of a problem on board *Polaris* submarines. Overweight SSBN crews are concerned about their ever-expanding midsections.

Lack of good food on the long patrols made by *Polaris* subs could result in a serious morale problem. Therefore, supply officers give the menus an extra measure of attention. Emphasis is on variety, but the standard favorites such as steak, roast beef, and chicken, are carried in quantity.

Because of the premium on space in the subs, meats are deboned and carefully trimmed before going into

the freezer. The development of many new ration-dense foods in a flavorful variety has helped remove some of the need for more space. (Ration-dense potatoes, for example, occupy from 50 to 80 per cent less space than regular spuds.)

Polaris submariners follow a regular meal schedule while on patrol, but, for morale purposes, there's a 'round-the-clock open-door policy on the refrigerator.

Overweight crewmen may find the answer to their problem by requesting duty on board *USS Lafayette* (SSBN 616), launched last May in Groton, Conn. — *Lafayette* has built-in exercise equipment for fighting the battle of the bulge.

Navy's First Andrew Jackson

The first U. S. Navy ship named for the seventh president of the United States was launched last summer. She is *Andrew Jackson* (SSBN 619), the fourth nuclear-powered, Fleet ballistic missile submarine of the *Lafayette* class.

Andrew Jackson is 425 feet in length, displaces 7000 tons (normal displacement), and is designed to fire 16 A-3 *Polaris* missiles.

The launching of *Andrew Jackson* brought the number of *Polaris* subs now in the water to 14. Of these, nine are in commission. The other five are having the finishing touches applied before they are commissioned.

Another 15 *Polaris* subs are under construction, and six more have been authorized for construction. The total of SSBNs already in commission, launched but not yet commissioned, under construction, and authorized, is 35.

Now We Can Track Fish

A contractor working for the Office of Naval Research has developed an instrument which acoustically tags fish so they can be tracked while swimming.

The device is contained in an aluminum capsule which is ten-and-a-half inches long, two-and-a-quarter inches in diameter and weighs a little more than a pound. It consists of a miniaturized transmitter which operates on the supersonic frequency of 38 kilocycles.

Although fish tracking is not new, there has so far been no device which has given such high resolution.

The instrument was tested at sea near Palm Beach, Fla., by fastening it behind the dorsal fin of a 300-pound sand shark which had been taken by rod and reel four miles off the Florida coast.

The movements of the shark were easily followed as it traveled about a quarter of a mile in a straight line from the boat then steadied to cruise close to the bottom 90 to 125 feet below the surface, covering a criss-cross pattern of about one square mile.

The new device will play an im-

YESTERDAY'S NAVY



On 12 Jan 1944 the U. S. Naval Air Station at Port Lyautey, Morocco, was established. On 24 Jan 1945 a battleship, cruiser and destroyer task group bombarded Japanese positions on two Jima. On 24 Jan 1945 land-based Navy planes from the Philippines bombed Japanese shipping at Formosa. On 26 Jan 1943 USS *Wahoo* (SS 238) sank an entire group of four Japanese ships north of New Guinea. On 29 Jan 1943 the Battle of Rennell Island began. On 29 Jan 1944 U. S. carrier-based aircraft began a series of strikes against the Japanese in the Marshalls.

portant role in the Navy's shark research program, since it will make it possible to test the reactions of sharks in their natural habitat to new types of shark repellents.

The new device will also be used to study the rate of diving and ascent of sharks, tuna and other rapid-swimming salt-water fishes, as well as large marine mammals such as whales.

Data on these animals can be used to reach a better understanding of how they can propel themselves so efficiently, silently and swiftly—a matter of obvious interest to the Navy.

The new tracking device may also give scientists a clue as to how marine creatures can navigate over long distances with such unerring accuracy.

Tests have indicated that the new instruments can be used effectively in depths up to 1000 feet and at speeds up to 12 knots under moderate sea conditions. The capsule is designed to be carried by any marine animal weighing more than 250 pounds.

The signal on the newly developed device transmits for 150 hours, but the Office of Naval Research expects that it can be refined to transmit for more than 250 hours, and that its size can be reduced sufficiently so that it can be attached to smaller fish.

The receiving equipment is compact enough to be used on small motor cruisers and can be easily transferred from one boat to another.

Icebreaker Visits Ice Island

U.S. Navy ships are likely to be found almost anywhere these days. A case in point is *USS Burton Island* (AGB 1), which has resupplied drifting ice island T-3 about 600 miles from the North Pole.

The icebreaker left Cape Lisburne, Alaska, to conduct an oceanographic survey in the ice-bound northern Chukchi Sea. When it was discovered that conditions would permit deeper entry into the ice pack than was anticipated, *Burton Island* pushed north, reaching T-3 at latitude 79 degrees, 11 minutes north, about 450 miles beyond the northernmost U. S. settlement.

With this feat, *Burton Island* claims to have set a record for the deepest ice pack penetration north of Alaska.

Burton Island crew members, as-



CHANNEL MAKING — *USS Burton Island* (AGB 1) carrying supplies to Fletcher's Ice Island, (T-3), is underway in northern Chukchi Sea.

sisting T-3 personnel, fought a 36-hour battle against blizzards and intense cold as 33,000 gallons of fuel oil was pumped into 600 barrels from the island's oil dump. Other supplies were offloaded from the icebreaker at the same time.

T-3, or Fletcher's ice island, is one of several ice floes occupied by the U. S. for scientific purposes in Arctic regions. Studies there are carried on in the fields of oceanography, meteorology, marine biology, marine geology and sound transmission. The ice island is staffed by personnel from the Arctic Research Laboratory at Point Barrow, Alaska.

After she left the island, *Burton Island* exploded underwater charges in connection with seismographic

work being done on T-3 by the staff of the Navy Underwater Sound Laboratory.

Berkeley Going to California

USS Berkeley (DDG 15) will join the Fleet early this year. The 437-foot guided missile destroyer was commissioned late last year at the Philadelphia Naval Base.

The new ship, which was launched 29 Jul 1961, is named for the late General Randolph C. Berkeley, USMC, who served for 40 years in the Marine Corps and received the Medal of Honor for action at Vera Cruz, Mexico, in 1914. *Berkeley* will first join the Atlantic Fleet, but only long enough to complete her transit from the Atlantic to the Pacific.



BUNDLED UP — Men of *USS Burton Island* (AGB 1) and T-3 battle intense cold while pumping 33,000 gallons of fuel oil into barrels.

A Man Overboard Can Be Awfully Lonely

Heroism in a cold, angry sea off the coast of Japan has won the Navy and Marine Corps Medal for LT Frank R. Herbert and Shipfitter Fireman Richard A. Gonzales.

Gonzales and his buddy, Robert D. Kunkle, were on their way to check the temperature of oil being heated in one of the tanks of the forward well deck of USS *Taluga* (AO 62).

The sea was rough and the well deck was taking some water. Both men had taken the standard safety precaution of wearing lifejackets to which lighted flashlights were fastened.

They had just arrived at the tank when an unexpected wave crashed over them, throwing them back against the lifelines with such force that the lines gave way and the men were washed overboard.

As luck would have it, at that very moment a quartermaster was on his way to the bridge to assist the navigator with the morning star-sights.

He stepped out of his compart-

ment when the wave hit, saw the flashlights in the water; raised the cry, "Man overboard!" and threw over lifelines and float lights to mark the spot.

Taluga's captain was checking by phone with the officer of the deck to see what, if any, damage the wave had done. The OOD had just picked up the phone when he heard the quartermaster's cry.

The OOD ordered the ship brought about. The captain took the conn. The crew, awakened by the wave's impact, rushed to their man overboard stations.

The men were located in the water. Kunkle was apparently injured and appeared to be growing weak, but his head was kept above water by Gonzales who doggedly clung to him in spite of the rough water.

Lowering boats into the heaving seas was out of the question, but LT Herbert, an amateur skin diver, slipped into his wet-suit and, with a line tied to him, went over the side after the men.

He reached them and was pulled back to the ship. However, as safety was literally within reach, another wave broke over them and the men in the lifejackets were swept away from the ship and out of sight. LT Herbert was pulled back on board exhausted.

Dawn broke and the float-lights and lifejacket flashlights were of no use in the light of day. The ship maneuvered toward the point where the two men were last seen and they were spotted again on the starboard side and aft.

The ship was brought to a stop to steady her against the weather and LT Herbert again entered the water.

Once more, he succeeded in getting the men to the ship. Nets were lowered from the side and they were brought aboard.

Gonzales and Kunkle had been in the freezing water for more than an hour. Gonzales was sick from swallowing salt water and from exposure. Kunkle, in spite of his shipmates' efforts, was dead.

Chuckling the Wooden Chocks

The familiar old wooden chocks that have been propped against the wheels of carrier aircraft for parking security for many years are about to be chucked over the side. Researchers at the Naval Air Development Center, Johnsville, Pa., have designed an all-metal wheel chock that

is easier to handle and should prove to be much safer.

Wooden wheel chocks have been a nagging source of trouble for many years. Under the pressure of revving jet planes, they'd often break, sometimes shatter, strewing splinters and metal screws across flight decks. Such objects sucked into the air in-

take of jet engines have been known to cause major damage. Even worse, the larger fragments hurtled across flight decks under jet exhaust pressure have resulted in serious personnel injuries.

What was needed was a chock that would not splinter, crack or shatter, and, better yet, could be easily adjusted for use on the wheels of any carrier aircraft.

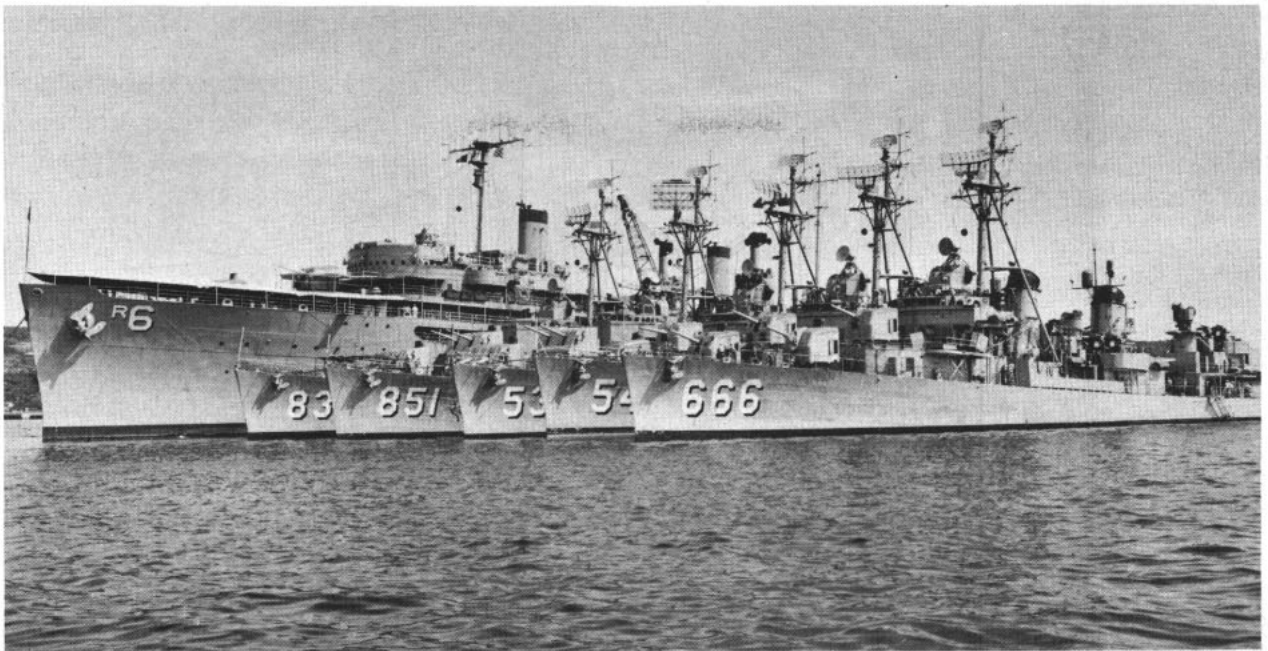
In late 1960 the Bureau of Naval Weapons asked NADC to produce such a wheel chock. NADC studied the forces involved, performed stress analysis tests, and examined all possible designs, always looking for simplicity, ruggedness, and lightness. They came up with an experimental model called the 1A, designed to fit the wheels of all carrier-based aircraft, large and small.

The 1A is made of high-strength, corrosion resistant, stainless steel and aluminum alloy, is about 45 inches in length, and weighs approximately 23 pounds.

For the acid test, NADC gave two 1As to the plane handlers of an aircraft carrier. The two chocks were used continuously during routine flight operations for two months. They were easy to handle, and op-



ON THE WAY UP — Advancing POs on board USS *Bashaw* (AGSS 241), each holding a tool of his trade, pose with their CO, XO and I&E officer.



PORT SIDE SERVICE—USS Ajax (AR 6), Seventh Fleet's largest repair ship, takes care of five destroyers.

erated perfectly. There were no parts that could work free and become missile hazards to flight deck personnel. And, there was none of the deck policing for wood screws, bits of non-skid strip and wood fragments, so long associated with wooden chocks.

The base of the 1A is coated with a nonskid substance of the same kind used on metal flight decks. The nonskid is good for about 30 days, and is easily replaced with a brush.

At last report, it was planned to order an initial quantity of 1000 1A chocks for Fleet use as a standard aviation item.

Torpedo Retrievers

What a ball boy is to a tennis player, the torpedo retriever is to the submarine.

For instance, when a Pearl Harbor sub goes out to fire a few for training purposes, a bright orange TR goes along and stations itself near the place the dummy torpedo is likely to surface.

When the sub fires its torpedo, it signals the torpedo retriever by ejecting a smoke bomb. The TR's crew begins looking for the orange painted head of the spent torpedo which is designed to float in a vertical position and is marked by a water soluble dye.

When the fish comes into sight, the TR maneuvers to the windward side of the torpedo, idles its two engines and drifts alongside it.

This is when the work begins. One

of the deck hands goes over the side to attach a metal loop to the torpedo's nose so it can be snagged by a boat hook. It is then maneuvered around to the rear of the TR, aligned with the stern and hauled aboard.

Incidentally, the man who goes over the side may or may not be reassured by the fact that his TR is equipped with an M-1 rifle to protect him from sharks.

There are four TRs at Pearl Harbor varying in length from 63 to 72 feet. Their torpedo-carrying capacity ranges from about six to 16 and, when pushed, they can make speeds up to 18 knots.

Between them, they recovered more than four million dollars worth of exercise torpedoes last year—98 per cent of those fired in practice.

—LTJG F. M. Milas, USN.



TOP INSTRUCTOR — Emmet E. Morrell, RMC, USN, receives Navy Commendation Ribbon and congratulations from VADM Thomas H. Moorer.



COOL DUTY — Snow-covered Mount Herschel provides scenic background for USS Edisto (AGB 2) in icy bay off Hallett Station in Antarctic.

Roughing It, Pre-Flight Style

One of the many things a student learns at the Naval School of Pre-Flight at NAS Pensacola, Fla., is how to stay alive in case he and his plane part company under less than ideal conditions.

Some of this knowledge can be gained from lectures, but the student comes by most of it through being led into the piney woods and swamp-land at nearby Eglin Air Force Base to fend for himself for three days and two nights without benefit of PX or commissary store.

The students travel in groups of about 30, equipped with compass, knife and other essentials they might have been able to salvage from their plane had they crashed in such an area.

There is an instructor with each

group to point out mistakes and to reveal some of the tricks of wilderness living the men might not pick up for themselves.

During their three days out of contact with the amenities, the men learn how delicious and tender raccoon, opossum and rattlesnake steaks can be, if they are hungry enough.

For vegetarians of long standing and for those who suddenly become vegetarians when they see the menu for the day, there is plenty to learn on the subject of what plant life can be eaten without ill effects.

In addition, considerable time is given to escape and evasion techniques, how to maintain a will to survive and how to supplement the diet (if any) of prison camps.

The theory behind the training is that young men today are victims of

an era of plenty. They, therefore, need to get away from civilization in order to learn their physical and mental limitations and to master the psychological barriers which might keep them from using the resources at hand.

Two Macks for Columbus

After almost four years of conversion, *uss Columbus* has been recommissioned as the first all-guided missile cruiser in the Pacific Fleet.

Columbus was converted from a conventional heavy cruiser (CA 74) to guided missile cruiser (CG 12). She will undergo fitting out at Puget Sound Naval Shipyard before joining the Fleet.

She carries the surface-to-air *Tartar* and the dual-purpose *Talos* guided missiles, plus the *Asroc* (antisubmarine rocket) weapons system.

In addition to her missiles and new hull number, *Columbus* sports a new superstructure and two "macks." Each "mack" is a combination of a mast and a smokestack—hence the word "mack."

Originally commissioned 8 Jun 1945, at Quincy, Mass., *Columbus'* conversion was started at Puget Sound Naval Shipyard, Bremerton, Wash., 1 May 1959.

Courtney Sets a Good Table

The Army may travel on its stomach, but soldiers have nothing on Navyman. They too travel on their stomachs, whether they're ashore or afloat, aboard a huge flattop or a bouncing DE.

Among destroyer type ships, *uss Courtney* (DE 1021) may be considered as an example. In 1961 she won the Ney Award for having the most outstanding mess afloat.

Under the direction of Chief Commissaryman Alton B. LeCroy, USN, three cooks and one baker prepare three meals a day (and while at sea, mid-rats) for some 150 men.

Courtney sailors have eggs to order every morning in addition to pancakes, creamed beef on toast or French toast, and a choice of two meats every day for dinner and supper. Also, for the noon meal, salads are made to look even more palatable through their arrangement on the salad bar. "Almost every man through the line samples at least one of the salads," bragged Chief LeCroy.

The ship buys bread and doughnuts; all other baked goods are pre-

MSTS Isn't Quite the Same as Rest of Navy

In the October 1962 issue of *ALL HANDS*, pages 24-27, we ran a feature story on the Military Sea Transportation Service. Since then, letters received from some of our readers seem to indicate that major differences between USNS ships and those designated USS aren't quite clear to the average Navyman. Here are a few:

- Ships designated USNS—about 110 in all—are painted standard Navy gray. They do not fly commission pennants, but can be distinguished by single blue and gold stripes around their stacks.

- The U. S. ocean shipping industry gets a large boost from MSTS. Many of its ships are op-

erated under MSTS charter or contract. During fiscal year 1962, more than \$273,000,000 was spent on commercial shipping.

- The hull-marking system on USNS ships differs somewhat from that for USS ships. Instead of the number, or letter-number, designation of the latter, USNS ships carry their names spelled out on the bows beneath "USNS."

- "T" is used to preface all MSTS ship designations. For example, the tanker USNS *American Explorer* is "T-AO 165," and the reefer USNS *Bald Eagle* is "T-AF 50." The "T" stands for "transportation."

pared aboard the ship. One baker does the baking during the night.

About 40 persons can eat at one time in Courtney's mess hall. The crew is usually fed in 30 minutes for breakfast, 45 minutes for dinner and about 30 minutes for supper. The time difference is due to the reduced number of men who eat the morning and evening meals.

Subs Named for WWII Veterans

Nuclear-powered attack submarines 638 and 639 have been named *Whale* and *Tautog*, respectively. Scheduled for launching in 1964, both were preceded by World War II submarines of the same name. *Whale* is now under construction in Quincy, Mass., and *Tautog* is being built in Pascagoula, Miss.

The first *uss Whale* (SS 239) was credited with sinking more than 57,000 tons of Japanese shipping during 1942 and 1943 and earned 11 battle stars for operations in the Asiatic-Pacific theatre. She was decommissioned after World War II and sold for scrap in 1960.

The original *uss Tautog* (SS 199) —named for a black fish found in Atlantic waters—sank 26 enemy ships in the Asiatic-Pacific area during World War II, more than any other sub. She was scrapped in 1959.

164 Tons Per Hour

The tricky business of stocking ships with supplies while they are underway can be accomplished in a hurry, as demonstrated by speedy re-



CAN WITH A BAND — The combo of *USS Lloyd Thomas* (DD 764) swaps music for fuel being received from *USS Forrestal* (CVA 59) in Med.

plenishment operations conducted by Sixth Fleet ships in the Mediterranean. How much of a hurry just depends.

uss Franklin D. Roosevelt (CVA 42) claims the Sixth Fleet record for the underway replenishment of a carrier is 164 tons per hour. *FDR* says the trick was turned in the Mediterranean last November when *uss Arcturus* (AF 52) replenished her with 211 tons of stores items in

a period of one hour and 28 minutes.

According to *uss Aldebaran* (AF 10), *uss Newport News* (CL 148) holds the cruiser record for underway replenishment. In 1960 *Aldebaran* stocked *Newport News* at the rate of 151.5 tons per hour.

The record rate of resupplying a destroyer is claimed by *uss Forrest Sherman* (DD 931). In October 1962 *Forrest Sherman* took on stores from *uss Rigel* (AF 58) at the rate of 71 tons per hour.

A rule of thumb seems to be that the bigger the ship being supplied, the more impressive the rate of replenishment. This is because bigger ships have more men to move what comes in, thereby making room for more.

For example, the 211 tons that *FDR* took on was handled by 875 men. The carrier's replenishment stations were operating at full speed; one station, located on number three elevator, alone accounted for 61 loads that weighed in at more than 90 tons. Thirteen dollies quickly moved the goods from the receiving stations to areas below decks, thereby preventing congestion. And, says *FDR*, unexpected difficulties with winches involved in the work held her back from an even higher rate of transfer.

At last report the attack aircraft carrier was shooting for a replenishment mark of 200 tons per hour.



FIRST IN HER CLASS — The nuclear-powered guided missile frigate *USS Bainbridge* (DLGN 25) is equipped with the Terrier missile and Asroc.

Brief news items about other branches of the armed services.

TWO OF THE MOST FORMIDABLE FOES of all fighting men, extreme heat and bitter cold, are being studied at the U. S. Army Research Institute of Environmental Medicine at Natick, Mass. Aiding in the study are two climatic chambers, arctic and tropic, which are subject to temperatures ranging from -70 to 165 degrees Fahrenheit at any desired humidity—and with wind at almost any velocity.

The chambers make it possible to study men and equipment under conditions found in deserts, steaming jungles, dry arctic wasteland, or cold wet areas.

One study now under way is the attempt to determine how salicylates, closely allied to aspirin, affect men working in extreme heat. Salicylates are used to reduce the temperature of patients with fever, and researchers hope to determine how salicylates influence the body's temperature adjustment to a hot climate.

Before the founding of the institute in October 1961, the Army carried on heat and cold research at two locations under two separate commands. The Army Medical Service had a climate research laboratory at Fort Knox, Ky., and the Army Quartermaster Corps had another at Natick, which provided support for the Quartermaster Corps program of protective clothing.

Because of the growing need for close coordination between the two laboratories, it was decided to combine them. The laboratory's staff includes physiologists, physicians, psychologists, biochemists, and other scientists and technicians selected to provide a varied approach to all research.

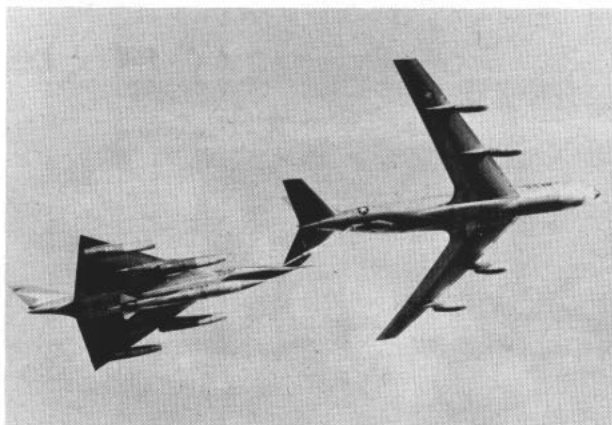
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PLANS ARE UNDERWAY for the establishment of a new Defense Intelligence School to prepare military officers and civilians for attache duty and command, staff, and policy billets. The school will be an advanced or post-graduate professional educational institution attached to the Defense Intelligence Agency, operated and controlled by DIA under the direction of the Joint Chiefs of Staff.

The school's commandant will be a general or flag officer of brigadier general or equivalent rank. The commandant and deputy commanders will be selected from different services, and the staff and faculty will be



ARTIST'S CONCEPT shows outward appearance of new class of cutter being built for U. S. Coast Guard.



HIGH OCTANE—A U. S. Air Force B-58 supersonic bomber is refueled in flight by KC-135 jet tanker.

selected from the various military departments on an equal basis.

A site for the new school has not yet been determined.

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THE AIR NATIONAL GUARD has opened a Radar Interceptor Officer School at Portland, Ore.

The new school trains radar observers for the F-89 fighter-interceptors used in nine Air National Guard squadrons. It replaces the training formerly given at James Connally Air Force Base, Tex., which was discontinued two years ago when the need for skilled radar observers at that time was satisfied.

Much of the equipment formerly used at the James Connally Air Force Base School has been transferred to the Portland installation.

The Radar Interceptor Officer School at Portland is the first school to be operated by the Air National Guard since the July 1961 closing of its jet instrument course at Ellington Air Force Base, Tex.

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THE ARMY IS TESTING a technique for quickly unloading cargo from moving ships, using helicopters and portable platforms that extend over the sides of cargo vessels.

The system consists of a 66-foot aluminum "wing" (which can be folded to a length of 40 feet for storage on the deck), a movable cargo platform or dolly capable of holding pallet loads of 9000 pounds, and a base unit mounted on the deck which permits rotation of the wing. An electro-hydraulic winch provides the power to move loads from one end of the wing to the other.

The wing device will give the Army the means of making rapid cargo or troop delivery from any type of ship anywhere in the world. Because unloading operations can be conducted while the ship is moving, the technique makes ships less vulnerable to air and submarine attack while transferring men and supplies.

First designed to handle helicopter sling loads, direct landings on the ship's wing have been made by the OH-23 Raven observation helicopter. The platform is now being modified to allow the larger UH-1 Iroquois utility helicopter to land and take aboard a squad of troops or evacuate the wounded.

When in operation, the wing is swung outboard with

one end over the center of a cargo hatch so that men and supplies can be moved rapidly into a helicopter. In the Army tests, supplies were loaded at a ton per minute.

A similar device was successfully tested by the Navy in replenishment at sea operations. This system may be used in naval amphibious operations to assist vertical envelopment helicopters in providing cargo support to landing forces.

★ ★ ★

ANY TANK SOLDIER who has been involved in target practice will agree the new electronic gadget developed by the U. S. Army Medical Research Laboratory at Fort Knox, Ky., will be greatly appreciated.

The box-like device protects the ears of armored soldiers from the high intensity noise of gunfire. It is connected by wires to the gun and intercom system of the tank. Before the gun goes off, the device generates a little clicking noise in the tankers' earphones which immediately contracts their eardrums.

Tests showed a substantial reduction in the temporary hearing loss often induced by the sound of gunfire.

★ ★ ★

THE AIR FORCE is testing an escape capsule for aerospace vehicles and high-altitude aircraft that is designed to permit a pilot to fly without a cumbersome pressure suit. The capsule, eight feet long and four feet wide, will protect him from high "G" forces and, after an ejection, provide him with shelter on either land or water.

When operational, the capsule will provide a safe escape from between sea level and a height of 100,000 feet, and from standstill to four times the speed of sound.

Weighing 2400 pounds, the capsule separates from its vehicle or aircraft when explosive bolts are set off and a propulsion rocket is ignited. Although the rocket burns only half a second, it has a peak thrust of 49,000 pounds. Complete ejection takes only six-tenths of a second, firing the capsule 1200 feet above the aircraft.

The capsule can also be ejected safely when the aircraft is taking off or landing.

When it is separated from a high-altitude craft and descends to about 15,000 feet, a small "drag" parachute



STUDENTS of Army's Cold Weather and Mountain Training School climb glacier near Fort Greely, Alaska.

opens and slows it to a speed that is safe for the opening of the main chute.

After the main chute opens the capsule falls at about the same speed as a man with a conventional parachute. Before the first parachute opens, three sweptback wedge-shaped airfoils near the rear of the capsule give it stability.

Six seconds after the main parachute is opened, the capsule is prepared for a landing on either water or land. Floats inflate at the ends of the lower airfoils to support the after end of the capsule so that it will not sink in water; the nose of the capsule is blown off; and the capsule is held to the parachute by only one line, permitting it to land in a level position on either water or land. Tests on the escape capsule are continuing.



NATIONAL Guardsman sights target for 106mm recoilless rifle during training at Camp A. P. Hill, Virginia.



BEACHING—Men of Army's 2nd Infantry Brigade practice amphibious assault at Little Creek, Va.

THE WORD

Frank, Authentic Advance Information On Policy — Straight From Headquarters

• **INCOME TAX REFUNDS** — Some Navymen who wonder where they are going to get the money to pay their Christmas bills may have a forgotten source of supply in the form of an income tax refund.

The commanding officer of the Navy Finance Center, Cleveland, Ohio, says some sizable sums of money are due naval personnel who have moved during the year without leaving a forwarding address.

If you fall into this category, you should make application for a refund through the Internal Revenue Service Regional Office in the region from which you have moved.

When you make your application, give your name and Social Security number; your present and former address and sign your name.

If you and your wife filed a joint return, you should also give the name of your wife and her Social Security number. She should also add her signature to the application.

• **TWO SERVICE RATINGS GET AX** — The AX rating (Aviation Antisubmarine Warfare Technician) is now an official part of the enlisted rating structure. All men (including designated strikers) in the service ratings of ATS and SOA were automatically shifted into the new rating on 1 Dec 1962. The ATS (Antisubmarine Warfare Equipment Specialist) and SOA (Sonarman—Airborne) job specialties have been dropped.

In addition, 642 men of 13 various general ratings were selected for changeover to AX by a special board

which convened at the Bureau of Naval Personnel last September.

All changes to AX were effected in the same pay grades the shiftees held in their old ratings. Those who successfully competed in the August 1962 advancement-in-rating exams were advanced in the normal manner, effective 16 Nov 1962, then shifted to AX on 1 December in the higher pay grade. Normal advancements to AX will begin with the February 1963 exams.

COs have been instructed to phase the new AX personnel into appropriate billets as quickly as possible. The ground rules for changeover to AX are contained in BuPers Notice 1430 of 29 Oct 1962.

• **STAR and SCORE**—If you are one of the hundreds of first-term Navymen who were advanced to petty officer third class (E-4) in any of more than 30 different ratings the past November, chances are the STAR people have already been around to see you. If not, rest assured they soon will be.

On the other hand, if you're an E-3, E-4 or E-5 in one of 27 ratings who passed the last Fleetwide examinations but were not promoted because of quota limitations, you've probably already been visited by your career counselors concerning the SCORE program aboard your ship or station. If you haven't, stand by—you soon will be.

If you're in either of the above categories you're probably eligible for one or the other of these pro-

grams which are intended to enhance your career in the Navy and to encourage career attitudes, particularly during first enlistments. The period just after the semiannual advancement dates is a good time to present these program opportunities.

STAR (Selective Training and Retention) and SCORE (Selective Conversion and Retention) have been doing a fine job of increasing the input of career Navymen into the critical ratings. Like all good programs, however, they can benefit from occasional reemphasis—hence the current reminder to all commanding officers to make a special effort to get the message across to all eligible crew members.

The benefits available through the STAR and SCORE programs are considerable—and the Navy is more than willing to push some of them your way if you can qualify.

Both STAR and SCORE have received reams of publicity over the past couple of years, and will not be reviewed here. If you haven't already been thoroughly briefed on one or both of them, you can get the complete info by visiting your personnel office or career counselor—on STAR from BuPers Inst. 1133-13B, and on SCORE from BuPers Inst. 1440.27A.

• **NEW SCHOLARSHIPS**—Five tuition aid scholarships, each worth \$420.00 annually, have been made available to children of submariners by the Submarine Officers Wives Club. The scholarships will be available to sons and daughters, including adopted children and stepchildren, of qualified submariners who have served at least five years in the submarine force.

Children of retired, Reserve and deceased submariners, as well as those of submariners on active duty,



IT'S TIME FOR A CHANGE . . . make a New Year's resolution to share your ALL HANDS with nine shipmates.

may be eligible. The five-year submarine service requirement is waived in the case of men who died while on active duty with the submarine force.

Awards will be based on the student's scholastic proficiency, character, general ability and financial need. The awards may be used to supplement other scholarships, and may be renewed for recipients who maintain high scholastic standards and continue to meet requirements on which the grant was based.

Applicants must be graduates of accredited high schools or their equivalents, and intend to work toward BS or BA degrees.

Applications may be obtained from the Chief of Naval Personnel (Pers G221), Washington 25, D. C., or from the Scholarship Chairwoman of the Dolphin Wives Club of San Diego, Calif.; Norfolk, Va.; Charleston, S. C.; or Key West, Fla.

Completed applications for the 1963 scholarships should be sent before 15 Apr 1963 to the Chief of Naval Personnel (Pers G221), Washington 25, D. C.

• **NEW ANTARCTIC COMMENDATION**—If you served with Task Group 43.2 in the Antarctic any time between November 1955 and April 1961, you are eligible for the Navy Unit Commendation award recently approved by the Secretary of the Navy.

BuPers Notice 1650 earlier announced the new award, and sets forth rules and regulations for applying for it. It points out that Task Group 43.2 was composed of personnel from Air Development Squadron Six (VX-6), but that only those members of VX-6 who were actually deployed to Antarctica as a part of Task Group 43.2 during the period mentioned above are eligible.

To get the ribbon bar and facsimile of the Navy Unit Commendation, however, you must, if you are a Navyman, apply to the Chief of Naval Personnel—and it will be up to you to furnish proof that you actually served in Antarctica during the eligibility period.

Application should be made on form NavPers 2887 (new 9-61), and should include your full name and service number, dates of deployment with VX-6, and evidence of such deployment. This evidence could be copies of orders or any other substantial proof that you were in fact

a member of Task Group 43.2 at some time between November 1955 and April 1961, in Antarctica.

• **FEBRUARY EXAM**—Deadlines are near for establishing your eligibility to participate in the February 1963 advancement in rating examinations. All pre-exam eligibility requirements must be completed at least one month before exam date, as follows:

Exam for	Exam Date	Eligibility Deadline
E-7	5 Feb 63	5 Jan 63
E-6	7 Feb 63	7 Jan 63
E-5	12 Feb 63	12 Jan 63
E-4	14 Feb 63	14 Jan 63

By the deadline date for the pay grade in which you wish to be examined you must have been recommended by your commanding officer and have completed any required practical factors, Navy training courses, and performance tests. If you're going up for PR3, DT3, MNCA, MUCA, AGCA, PT3, HM3, or AME3 (the latter two ratings will be included in a forthcoming change to BuPers Inst. P1430.7D) you must have been graduated from an appropriate Navy service school. Time in service and time in pay grade requirements will be considered to have been met if fulfilled on or before 16 May 1963.

• **ADVANCE PAY**—An official study of the known financial problems of many Navy men has indicated the "dead horse," or three months' base pay drawn in advance, is directly responsible for many cases of indebtedness. As a result, CO's have been instructed to take a longer, harder look at all advance pay requests and turn down those that may mean future financial trouble.

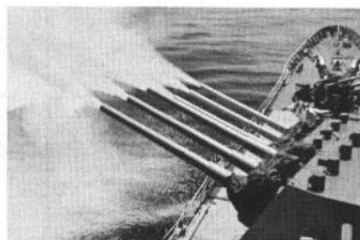
The new word is contained in BuPers Notice 7220 of 16 Nov 1962, which amplifies the basic policy on advance pay contained in the *BuPers Manual* (Article A-4104). In general, advance pay up to an amount equal to three months' base pay may be granted upon permanent change of duty station. But, the advance payments will now be made only when:

- The Navyman or woman making the request is cautioned about the financial hazards that may crop up during lean pay months ahead.
- The financial status of the person concerned has first been thoroughly reviewed.
- Advance pay, as determined by the review, is justified.
- The amount can be repaid without undue hardship in six months.

QUIZ AWEIGH

Caliber and calibers are two terms used in connection with naval guns. Together, they identify the size of a particular gun. What is the caliber of your gun knowledge?

1. **Caliber** is a term most of us are familiar with if we have had experience with firearms of any type. The caliber of a gun is determined by
 - (a) measuring the diameter of the outside of the barrel,
 - (b) measuring the length of the barrel,
 - (c) measuring the diameter of the bore (inside of the barrel).



2. **Calibers**, the other term which tells us a gun's size, refers to the
 - (a) weight of the gun,
 - (b) length of the barrel,
 - (c) effective range.
3. The length of the barrel of a gun can be determined by simple arithmetic. A 5-inch/38 has a barrel length of
 - (a) 15 feet, 10 inches,
 - (b) seven feet, seven inches,
 - (c) 33 feet.



4. Guns with bores of less than a certain size are designated by caliber only. These guns must have bores of
 - (a) one inch or less,
 - (b) two inches or less,
 - (c) three inches or less.
5. A 50-caliber machine gun has a bore of
 - (a) one inch in diameter,
 - (b) one-half inch in diameter,
 - (c) one-quarter inch in diameter.

Answers may be found on page 47.

THE BULLETIN BOARD

You'll Find Navy Duty in Puerto Rico Has a Spanish Flavor

SOME DUTY STATIONS are better liked than others. Here's the story on duty in a tropical isle, one that is also a tourist attraction—Puerto Rico. Roosevelt Roads, Ramey and San Juan are three locations which some Navy families now call home.

Although the Spanish customs have been modified, the island is still culturally more Spanish than North American. The food, housing, music, literature, family organization, social relationships, celebrations and child training are predominantly Spanish. However, this makes for a more interesting environment for most Navy-men. Although the chaperon may not be too popular with them, the siesta hour during the mid-day will be. Both are still in evidence.

Because of the influence of its early Spanish conquerors, Puerto Rico is a Spanish speaking island. However, English is taught in all schools. The majority of the educated persons speak, read and write both English and Spanish. You would do well to either learn some Spanish before coming to Puerto Rico or should plan to take up the study of this language upon arrival, both as a goodwill gesture and as a means of further enjoying your stay on the island.

Housing—You must obtain prior approval from the Commandant Tenth Naval District in order to bring dependents into the area. This entry approval is based on immunization and the availability of housing. When entry approval is requested, you must indicate the command to which ordered.

You should advise your new command as far in advance as possible of your estimated date of arrival and mode of transportation when firm, to enable local transportation arrangements for sponsor and dependents.

Religion—The island is predominantly Roman Catholic. Protestant, Catholic and Latter Day Saints services are conducted weekly at station chapels. English language services in

some denominations are held at churches in San Juan. There is a Jewish congregation in San Juan which welcomes servicemen. In addition, the rabbi visits Ramey twice a month.

San Juan

You may be assigned housing either on station public quarters or the San Patricio housing development which is located five miles south of the station. Quarters on station are limited to officers and CPOs, but the housing units at San Patricio are considered quite adequate. Transportation to and from San Patricio is provided by Navy bus. For Fleet units whose home port is San Juan, quarters are provided in the San Patricio housing development.

All quarters are furnished with stoves, refrigerators, beds and mattresses, and other furniture sufficient to satisfy basic needs. You should bring along as "hold baggage" a sufficient supply of pots, pans, dishes, silverware, linen, and clothing to set up housekeeping. Household kits containing the basic needs are available but, owing to limited number, arrangements should be made by you or someone in your behalf before your arrival.

Other furnishings such as curtains and/or drapes, clothes, washers,

dryers, fans, tables and occasional tables and floor and table lamps, may be brought with household effects shipment or may be bought at the Navy Exchange or at local stores.

There are many establishments selling good furniture in the larger towns but except for mahogany and bamboo articles prices are higher than at home. If any of your own furniture is taken, it should be a type suitable for use in the tropics and not susceptible to termites and corrosion.

Renting of private housing is considered extremely expensive and is not recommended. Currently there is a slight waiting period for on-station housing.

Hotels—In San Juan several first-class hotels are available. Daily rates start at \$10.00. These hotels generally cater to tourists and during the winter months you may find that accommodations are either not available or are extremely expensive. Reservations in advance can always be made by mail in order to avoid embarrassment on arrival.

Education—The school on the San Juan Naval Station offers standard curriculum from kindergarten through grade six for dependents living in the naval station area.

Kindergarten through junior and senior high school curriculum is provided for Navy dependents on Fort Buchanan. Kindergarten and grades one through six students living in San Patricio are expected to attend school at Fort Buchanan. Bus transportation is provided. All grades except kindergarten are on a full day basis. Bring transcripts of previous school grades or report cards.

There is a nursery school on the San Juan Naval Station, at a cost of \$10.00 per month per pupil. The University of Puerto Rico offers good college courses primarily conducted in Spanish with textbooks in English. Florida State University extension courses are available for servicemen and their dependents who wish to utilize their spare time to study.



"What do you mean we're lost . . . you've got a compass!"

Domestic Help—Servants are readily available. Untrained maids usually are paid about \$2.50 per day. Because of the tremendous increase in hotel construction in Puerto Rico, good servants other than cleaning women are hard to find, and the turn-over is extremely high. Part-time and full-time maids, cleaning women, and laundresses are available but may not report regularly for work. It is customary for breakfast and lunch to be provided for them.

Ramey AFB

Government quarters are completely furnished with automatic washers, living room sets, dining room sets, stoves, refrigerators and bedroom sets. The very minimum items of household effects should be brought into the area since the Air Force will not unfurnish these quarters to make room for occupants' household effects. Storage facilities are not available for household effects if brought into the area.

Lawn and garden equipment is not available for care of lawns and hedges which is the responsibility of each occupant. Dependents' assistance has a limited supply of necessary kitchen utensils for issue to new arrivals pending receipt of their household effects. Bring electric fans. Forfeiture of quarters allowance is required to occupy these quarters. Off-base housing is scarce and sub-standard.

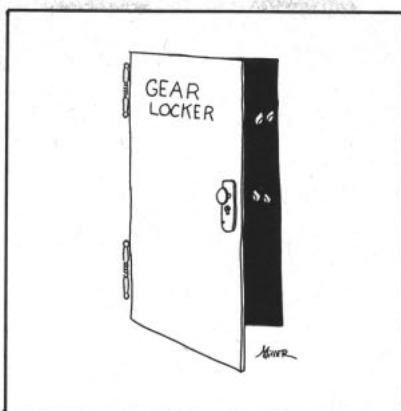
Ramey has an excellent school system for grades one through twelve. The extra-curricular program takes full advantage of the fine recreation area provided by each school. It is important to obtain transcripts of credits for schooling already completed, as well as available information regarding the children's particular aptitudes and educational levels. If transcripts are not available, you should bring report cards. Florida State University extension courses are available.

Roosevelt Roads

There are usually, but not always, sufficient numbers of officer and enlisted quarters available. At times a short waiting period may be necessary. Forfeiture of quarters allowance is required to occupy these government quarters. Off-base housing is scarce and sub-standard.

All station government housing is fully furnished with furniture of rat-

All-Navy Cartoon Contest D. E. Miller, SN, USN



"I wonder if it's 'knock off work' time yet?"

tan and mahogany construction. An electric stove, electric water heater and a combination refrigerator-freezer are included. A deep freeze or additional refrigerator is often useful. Washing machines and an electric dryer are desirable.

Three TV stations can be received

(very few English programs). This activity now operates its own TV station.

Each family provides its own linen, cooking utensils, silverware and china. Crates, boxes, trunks and other packing containers should be limited to disposable types as much as possible since storage space is limited to household furniture.

There is a station school which is a branch of the Antilles Consolidated School with grades from kindergarten through 12 providing standard curriculum. All grades are on a full day, 0830 through 1430. Buses carry school children from bus stops near their home to and from the school. Ample playground is available.

Pets—General information on the shipment of pets will be forwarded when you apply for travel. No taxes are imposed at time of entry nor are licenses required. Veterinary services and kennel accommodations are available to a limited degree.

Passports—Passports are not required in this U. S. commonwealth.

HOW DID IT START

Dry-Land Wheel Watch

Contrary to what you might be thinking, a wheel watch is not necessarily a watch at a steering station. Neither is it akin to a "mail-buoy" watch or any of the other "watches" sometimes assigned to a novice sailor.

One dry-land version of the wheel watch is performed by non-rated members of ground crews at naval air stations. The watch consists of standing to the side of a runway to inspect and signal aircraft as to the state of the wheels and dive brakes before each landing.

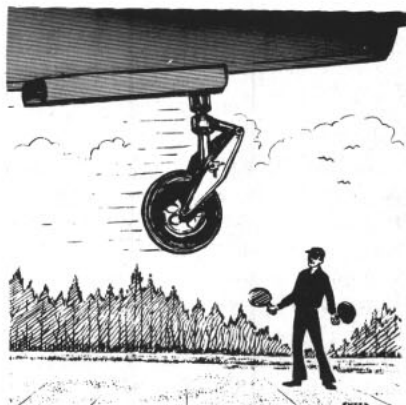
The watchstander is equipped with red and green flares and two brightly colored paddles. When an aircraft makes an approach, the watch checks to see that the wheels and dive brakes are in proper position for landing. If the oncoming aircraft is in proper landing condition, the watch gives an OK with the two brightly colored paddles. If there is a malfunction in the landing gear or dive brakes, the watch fires red flares at an angle in front of the aircraft, signaling the pilot not to land.

At night, two wheel watches are stationed at each runway. The first checks the aircraft as it passes in front of him. If anything is wrong, he fires a red flare signaling the second watch to fire another red flare to

signal the pilot. This is necessary because after dark the landing gear and dive brakes are impossible to check accurately until the aircraft nears the wheel watch.

The green flares are used to let the control tower know that the wheel watch needs supplies or assistance.

No one knows how many lives and aircraft the dry-land wheel watches have saved, but the men who stand them belong in the same class as lookouts aboard ship as far as safety to men and equipment is concerned.



Clothing—Summertime clothes are in order the whole year—cotton, rayon, nylon washables. During the winter months, in the evenings, a light sweater may be desirable. It is suggested that no heavy fall or winter clothing be brought, especially clothing requiring special storage such as furs. A light raincoat, preferably plastic, will be useful as will the summer uniform raincoat. Informal dress is in order at most times. At dances, ladies usually are in evening or afternoon dresses. There are some occasions where formal attire (white uniform or summer tuxedo) is required.

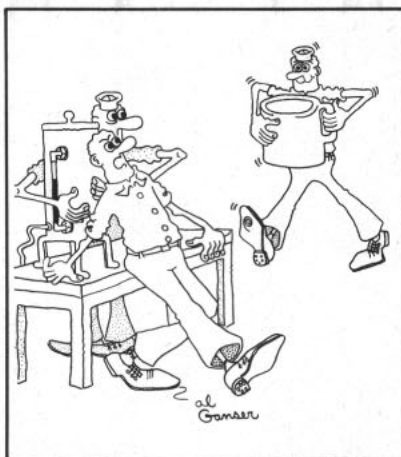
Civilian clothes are permitted when off duty. On duty, tropical khaki long, or short, is the customary uniform for officers and CPOs. The uniform for other enlisted personnel is undress whites B, or tropical white long, or short. Uniforms for inspection or change of command ceremony vary from full dress white to service dress khaki for officers and CPOs. The uniform for other enlisted personnel is service dress white.

Blues are never required, but should be brought along in anticipation of stateside temporary additional duty or emergency leave. The Navy Exchange has basic items of clothing, underwear and outerwear for sale; selection is limited. Clothing of excellent quality is available in a number of good local stores. Considerable difficulty will be encountered in obtaining certain unusual sizes of footwear. Odd sizes in clothing or shoes will usually not be available. This difficulty is more often encountered with women's and children's apparel. Ladies can find some excellent dressmakers, although it may take some looking. Cloth by the yard is unusually reasonable, although great care must be taken to insure that the material is not "second."

Prices on clothes are not appreciably different from stateside. Shopping by mail order will be found to be quite satisfactory. Service is excellent in all respects. Your favorite mail order house will be just as dependable in Puerto Rico as in the States and will often meet needs that cannot be satisfied in local stores.

Laundry and dry cleaning service is provided on the naval station at moderate cost. There are also a num-

All-Navy Cartoon Contest
A. P. Ganser, MM2, USN



"Quick, ditch the pot—here comes Marvin for a refill."

ber of commercial establishments offering such service.

Food—Commissaries carry an adequate line of almost all foods. Shortages occur in certain items from time to time when there is a long period between supply ship arrivals, but stocks are generally adequate. Pasteurized fresh milk is delivered by local dairies at a moderate price. Local fruits and vegetables are plentiful in season and are reasonable in price. There are many well stocked supermarkets in the San Juan area.

Banking—Dependable banking concerns, including branches of large international banks, are located in San Juan. Reliable, locally-owned banks are operated in most communities. U. S. currency is used. Continental banking can be easily utilized. Airmail from and to Puerto Rico is excellent and compares with coast-to-coast service in the U. S.

Recreation—Many opportunities exist for recreation and amusement. Such sports as baseball, tennis, swimming, basketball, golf, fishing, bowling and others are year-round activities. There are movies on the station every night. Dances, formal and informal, are arranged at the EM, CPO and officers' clubs at frequent intervals. Camera enthusiasts will find good subjects for color slides and movies. There are outdoor swimming pools on the San Juan Naval Station at both the EM and officers' clubs. There is salt water bathing at the Army and Navy beach in San Juan

and at a number of other spots along the coast as well.

Fishing, both deep sea and fresh water, is excellent. Numerous mountain lakes and streams have an abundance of bass and catfish. In the San Juan area, at Fort Buchanan and Fort Brooke are two nine-hole golf courses; at Ramey Field and at Roosevelt Roads (80 and 50 miles distant, respectively) are two more courses. Golf clubs can be checked out for 24 hours at a time through Special Services and at all service golf courses.

Ramey and Roosevelt Roads have stables where riding horses can be hired or purchased. Trips to other islands at very reasonable commercial air rates are available as time and opportunities permit.

Automobiles—An automobile is very handy and in some areas practically a necessity. Bring a small car if available. It is advisable to have a new car, or a car in good condition undercoated; the weather and climate cause the body of an automobile to deteriorate rapidly. Have repairs such as front end alignment, wheel balancing, headlight adjusting, radiator flushing, generator brushes renewed, muffler and tail pipe renewed, etc., completed before shipping.

Major repairs are very expensive and the quality of workmanship is questionable. If you have a car that will last for your tour of duty in the area with only minor repairs, bring it instead of a new one. Roads are crowded, and except for a few, rough; the speed limit is low, so you do not need a high-powered automobile. Public liability insurance is required to operate a car on the Naval Station. Insurance rates are approximately double stateside rates.

Your stateside driver's license is valid in Puerto Rico for three months upon arrival. Dependents must obtain Puerto Rico drivers' licenses. A non-resident decal will be issued for your car allowing you to use your continental plates. This decal is good for your entire stay in Puerto Rico.

No taxes are imposed on cars shipped at government expense. Owing to transportation charges and the insular tax, cars purchased on the island are expensive. If you buy a used car on the island, you must pay the insular tax.

Medical Care—The station dispen-

sary at Naval Station San Juan offers limited outpatient care including prenatal care for naval dependents. Those requiring inpatient treatment are hospitalized at the Rodriguez U. S. Army Hospital at Fort Brooke, San Juan. This hospital has all normal facilities for medical and surgical services.

A hospital has been opened at Naval Station Roosevelt Roads, and provides outpatient and inpatient care for dependents, including maternity care. Dental care is provided to dependents on a facilities available basis.

The hospital at Ramey Air Force Base offers complete dental, medical and surgical care for all Naval Facility personnel and dependents.

That's duty in Puerto Rico. Have a good tour.

Revised Regulations Clarify Navy Requirements on Scuba Quals for All Divers

All Navy divers must qualify in the use of Scuba (self-contained underwater breathing apparatus) by 1 Jul 1963. Failure to qualify will result in the loss of the diver's designation. But it is assumed most will qualify.

For a number of years, the *BuPers Manual* has required that all divers be qualified in the use of Scuba. However, the *Manual of Navy Enlisted Classifications* lists two NECs each for Diver Second Class through Master Diver, one NEC for men qualified in Scuba and the other for those who aren't. For example there is an NEC for Master Diver, NEC 5311, and one for Master Diver/Scuba Diver, NEC 5341.

These dual category NECs are to be eliminated and as of 1 Jul 1963 these changes will go into effect:

- NECs 5341, 5342 and 5343—presently Master Diver/Scuba Diver; Diver First Class/Scuba Diver; and Diver Second Class/Scuba Diver—these categories will retain the same numbers, but lose the Scuba Diver part of the title.

- NECs 5311, Master Diver; 5312, Diver First Class; 5313, Diver Second Class; 5314, Salvage Diver; and 5344, Salvage Diver/Scuba Diver—categories will no longer be used.

- NECs of 5344, Salvage Diver/Scuba Diver, will automatically be

ANSWERS TO QUIZ AWEIGH

1. (c) Measuring the diameter of the bore (inside of the barrel).
2. (b) Length of the barrel.
3. (a) 15 feet, 10 inches.
4. (a) One inch or less.
5. (b) One-half inch in diameter.

Quiz Aweigh is on page 43.

recoded 5343, Diver Second Class, unless the Chief of Naval Personnel is notified that the holder has qualified for a higher diving designator.

- Diver NECs 5311, 5312, 5313 and 5314 will automatically be revoked for those not meeting Scuba requirements.

All commands having designated divers attached who are not currently qualified in SCUBA, are requested to insure that they fulfill minimum Scuba requirements before 1 Jul 1963. When the requirements are met, the command is to report this to the Chief of Naval Personnel (Attn: Pers-B224) for the appropriate change in NEC.

To meet Scuba requirements listed in the *BuPers Manual*, a Diver Second Class or above must:

- Know Scuba safety precautions.
- Be familiar with underwater hazards encountered in Scuba diving.
- While underwater, clear water from inside the face mask and breathing apparatus.
- Ditch and don Scuba underwater.
- Know techniques of free ascent to the water's surface.
- Dive and accomplish work including underwater search, hull inspection, repair, and salvage, using Scuba.
- Swim 500 yards underwater using fins, face mask and Scuba.
- Dive to a depth of 130 feet and remain there 10 minutes if he is qualifying for Master Diver or Diver First Class, or dive to 50 feet for 15 minutes if he is meeting requirements for Diver Second Class.

Complete information on these changes is available in BuPers Notice 1500 of 5 Oct 1962.

NOW HERE'S THIS

Tall Tuna Tale

In the normal course of events, a shipboard sailor caught fishing during working hours would have to answer to the Old Man. Chances are, moreover, that any answer he could think up wouldn't do him much good.

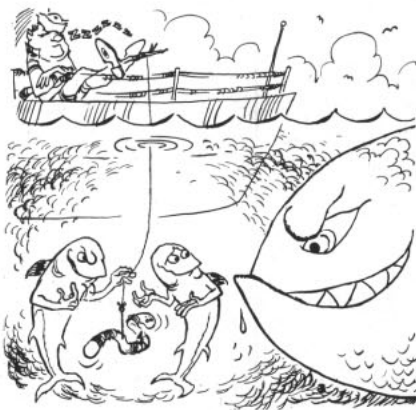
Aboard the Pacific Fleet radar picket escort ship USS *Koiner* (DER 331), however, crewmen spend many happy and profitable hours trolling busily—and with the blessings, no less, of the U. S. government.

Koiner, you see, spends a great deal of her time patrolling the Pacific early warning radar barrier. And, since they're out there anyway, and since almost anything calculated to help pass the time in what is often, at best, a monotonous routine is welcome, *Koiner*men cooperate with the U. S. Bureau of Commercial Fisheries in that agency's Tuna Oceanography Program.

Whenever a *Koiner* crewman catches an albacore tuna, it is weighed, measured and examined to determine its past eating habits. Other information is gathered by use of bathythermographs (which measure the sea water temperature at various depths) and through taking of water samples twice daily.

These figures are then passed on to the fishing bureau. The information gained is used in aiding U. S. fishing fleets in locating incoming schools of tuna, and to further the fishing bureau's knowledge of Pacific tuna distribution.

So far, *Koiner*men claim to have caught more than 350 tuna in approximately the last two years. They say nothing of any which may have gotten away.



Navy Aircraft Designators Have Been Restyled—Here Is Why

BY NOW YOU'VE PROBABLY heard about the new standard letter-number system of designating all military aircraft, which recently resulted in new identification symbols for virtually every plane in the Fleet.

If you're confused by it all, you're not alone.

One airman, who prefers to remain anonymous, buzzed into ALL HANDS recently with what he called his squadron's latest theme song, the lyrics of which are sung to the tune of *Bell-Bottom Trousers*:

"We'll fix your airplanes
And we'll fly them too,
But please don't ask us what
they're called
It sure ain't F8U."

This, insists the composer, is the general feeling of the men in his squadron, which operates the fighter plane known as the *Crusader*.

But, he added, the confusion is gradually clearing. A great deal is learned by word of mouth:

Airman: "Your F8U-1 is ready to go, Sir."

Pilot: "You mean F-8A."

Airman: "F8U-1, Sir."

Pilot: "It's now called an F-8A."

Airman: "You're putting me on, Sir."

Pilot: "It's an F-8A, sailor."

Airman: "Yes Sir."

The Navy-wide directive which ordered the change, BuWeps Inst. 13100.7, was issued in September.

Under the uniform designation procedure, any specific aircraft will have the same letter-number identification symbol, no matter which service is using it.

Only a few Navy aircraft are unaffected by the order. These are planes that already had the standard designations.

The most noticeable difference between the old designations and the new is the elimination of manufacturers' letters. No longer is the attack plane known as the *Skyraider* designated an AD-5 (D for Douglas Aircraft, the designer). Now it's the A-1E.

In order that the transition may be made as easily as possible, and with a minimum of confusion, the system is phasing into use gradually. Until the man in the Fleet has learned the new procedure, reference sheets

which show both the old and new designations have been issued as training aids.

Men who, for some reason or other, are required to have a working knowledge of aircraft designators, have found that the new system is not hard to learn. Most of the symbols are basically the same as they used to be. The position of any one symbol in the designator sequence may have jumped around a little but, once the observer is eyeborne, the meaning of the new symbols can be quickly memorized.

On paper, all the new aircraft designations have at least one thing in common—a hyphen—which is the key in the analysis of any one designator.

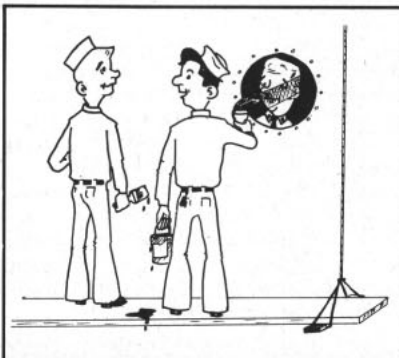
Basic Mission

A letter just before the hyphen specifies the basic mission the aircraft is designed to perform.

- A—Attack
- B—Bomber
- C—Cargo/Transport
- E—Special Electronic Installation
- F—Fighter
- H—Helicopter
- K—Tanker
- O—Observation
- P—Patrol
- S—Antisubmarine
- T—Trainer
- U—Utility
- V—VTOL and STOL (Planes designed for vertical take-off and landing. Also aircraft capable of taking off and landing in a minimum prescribed distance.)
- X—Research
- Z—Airship

For economy, changes in official directives and manuals that list the

All-Navy Cartoon Contest
J. R. Leozewski, SMSN, USN



"The lieutenant said he'd give me that special liberty if I didn't foul up any more."

old designations will not be made until revised for some other reason. (Where possible, COs have been told, pen-and-ink changes should be made, and new cover pages should be inserted.)

Design Numbers and Modification Letters

A number after the hyphen (one or two digits) specifies the number of each new design of the same basic mission or type aircraft.

If there has been a change in the aircraft from its original design, this is indicated by a letter, the alphabetical order of which indicates the number of the modification.

For example, the A in A-1E means this is an attack plane. Its design number is one, and it has been modified five times, which is represented by the fifth letter of the alphabet. This aircraft was formerly designated AD-5—meaning attack plane, built by Douglas Aircraft, that has been modified five times.

Mission Modifications

If the aircraft has been modified from its original mission, a letter in front of the basic mission symbol (letter) tells what it has been modified to do. Mission modifications are:

- A—Attack
- C—Cargo/Transport
- D—Director (For controlling drone aircraft or missiles.)
- E—Special Electronic Installation (For airborne early warning, etc.)
- H—Search/Rescue
- K—Tanker
- L—Cold Weather plane (For Arctic or Antarctic operations.)
- M—Missile Carrier
- Q—Drone
- R—Reconnaissance
- S—Antisubmarine
- T—Trainer
- U—Utility
- V—Staff
- W—Weather

Thus, if the A-1E described above is modified to perform early warning missions, she becomes an EA-1E. (Under the old Navy system such an aircraft would be an AD-5W, the W suffix representing an airborne early warning version of the AD-5.)

Special Use

Another set of letters which may appear before the basic mission symbols indicates the plane's special use,

or status. To eliminate confusion, any one special use letter is not the same as any one modified mission letter.

Special use symbols are:

G—Permanently Grounded (For instruction and ground training purposes.)

J—Special Test, Temporary (Modified for special testing. Upon completion of tests, plane will be restored to its original design.)

N—Special Test, Permanent (Permanently modified for testing.)

X—Experimental (Not yet adopted for service use.)

Y—Prototype (Purchased in limited numbers for complete testing of design.)

Z—Planning (Indicates the aircraft is in the early stages of planning or development.)

If both a special use letter and modified mission letter are specified on the same aircraft, the special use

symbol comes first. For example, YEA-3A would refer to a prototype (Y), early warning (E), attack plane (A). Using the post-hyphen translation procedures already described, you see its design number is three, and the design has been modified once.

The following is a roundup of Navy aircraft designators. For easy cross-reference, both the new and old symbols are listed.

Table of Old and New Designations Will Help You Identify Planes Correctly

ATTACK		TC-47J	R4D-6R	F-2D	F2H-4	TH-13L	HTL-4	QP-4B	P4Y-2K
Current	Former	VC-47J	R4D-6Z	YF-3B	Y/F3H-2	TH-13M	HTL-6	P-5A	P5M-1
EA-1E	AD-5	TC-47K	R4D-7	F-3B	F3H-2	TH-13N	HTL-7	SP-5A	P5M-1S
EA-1E	AD-5W	VC-54N	R5D-1Z	MF-3B	F3H-2M	UH-13P	HUL-1	TP-5A	P5M-1T
EA-1F	AD-5Q	C-54P	R5D-2	F-3C	F3H-2N	HH-13Q	HUL-1G	P-5B	P5M-2
A-1G	AD-5N	VC-54P	R5D-2Z	F-4A	F4H-1F	UH-13R	HUL-1M	SP-5B	P5M-2S
A-1H	AD-6	C-54Q	R5D-3	F-4B	F4H-1	CH-19E	HRS-3		
A-1J	AD-7	VC-54Q	R5D-3Z	RF-4B	F4H-1P	UH-19F	HO4S-3		
A-2A	AJ-1	C-54R	R5D-4R	YF-6A	Y/F4D-1	HH-19G	HO4S-3G		
YA-3A	Y/A3D-1	C-54S	R5D-5	F-6A	F4D-1	UH-25B	HUP-2	ANTISUBMARINE	
A-3A	A3D-1	VC-54S	R5D-5Z	YF-7A	Y/F2Y-1	UH-25C	HUP-3		
YEA-3A	Y/A3D-1Q	C-54T	R5D-5R	YF-8A	Y/F8U1	LH-34D	HUS-1L	Current	Former
EA-3A	A3D-1Q	C-117D	R4D-8	F-8A	F8U-1	YSH-34G	Y/HSS-1	YS-2A	Y/S2F-1
YRA-3A	Y/A3D-1P	LC-117D	R4D-8L	DF-8A	F8U-1D	SH-34G	HSS-1	TS-2A	S2F-1T
A-3B	A3D-2	VC-117D	R4D-8Z	QF-8A	F8U-1KD	UH-34D	HUS-1	S-2B	S2F-1S
EA-3B	A3D-2Q	C-118B	R6D-1	YRF-8A	Y/F8U-1P	VH-34D	HUS-1Z	S-2C	S2F-2
YRA-3B	Y/A3D-2P	VC-118B	R6D-1Z	RF-8A	F8U-1P	UH-34E	HUS-1A	RS-2C	S2F-2P
RA-3B	A3D-2P	C-119F	R4Q-2	TF-8A	F8U-1T	HH-34F	HUS-1G	S-2D	S2F-3
TA-3B	A3D-2T	C-121J	R7V-1	F-8B	F8U-1E	SH-34H	HSS-1F	S-2E	S2F-3S
YA-4A	Y/A4D-1	EC-121K	WV-2	YF-8C	Y/F8U-2	YSH-34J	Y/HSS-1N		
A-4A	A4D-1	YEC-121K	Y/WV-2	F-8C	F8U-2	SH-34J	HSS-1N	TRAINER	
YA-4B	Y/A4D-2	WC-121N	WV-3	YF-8D	Y/F8U-2N	CH-37C	HR25-1	Current	Former
A-4B	A4D-2	EC-121L	WV-2E	F-8D	F8U-2N	UH-43C	HUK-1	T-1A	T2V-1
YA-4C	Y/A4D-2N	EC-121M	WV-2Q	YF-8E	Y/F8U-2NE	OH-43D	HOK-1	YT-2A	Y/T2J-1
A-4C	A4D-2N	TC-117D	R4D-8T	F-8E	F8U-2NE	CH-46A	HRB-1	T-2A	T2J-1
A-4E	A4D-5	C-130F	GV-1U	DF-9E	F9F-5KD	QH-50A	DSN-1	T-2B	T2J-2
YA-5A	Y/A3J-1	KC-130F	GV-1	F-9F	F9F-6	QH-50B	DSN-2	T-28A	T-28A
A-5A	A3J-1	LC-130F	C-130BL	DF-9F	F9F-6D	QH-50C	DSN-3	T-28B	T-28B
A-5B	A3J-2	C-131F	R4Y-1	QF-9F	F9F-6K	XH-51A	(New)	DT-28B	T-28BD
A-5C	A3J-3	C-131G	R4Y-2	QF-9G	F9F-6K2			T-28C	T-28C
A-6A	A2F-1	C-140C	UV-1	F-9H	F9F-7			T-33B	TV-2
EA-6A	A2F-1H	C-1A	TF-1	F-9J	F9F-8	OBSERVATION		DT-33B	TV-2D
		EC-1A	TF-1Q	YAF-9J	Y/F9F-8B	Current	Former	DT-33C	TV-2KD
		C-2A	(New)	AF-9J	F9F-8B	O-1B	OE-1	T-34B	T-34B
				YTF-9J	Y/F9F-8T	O-1C	OE-2	YT-34B	Y/T-34B
				TF-9J	F9F-8T			T-39D	T3J-1
				RF-9J	F9F-8P				
BOMBER				F-10A	F3D-1	PATROL		UTILITY	
				F-10B	F3D-2	Current	Former		
Current	Former	SPECIAL ELECTRONIC INSTALLATION		EF-10B	F3D-2Q	P-2D	P2V-4	Current	Former
UB-26J	JD-1			MF-10B	F3D-2M	P-2E	P2V-5F	U-1B	UC-1
DB-26J	JD-1D	Current	Former	TF-10B	F3D-2T2	DP-2E	P2V-5FD	U-6A	L-20A
		E-1B	WF-2	YF-11A	Y/F11F-1	EP-2E	P2V-5FE	U-11A	UO-1
		E-2A	W2F-1	F-11A	F11F-1	SP-2E	P2V-5FS	HU-16C	UF-1
CARGO-TRANSPORT						P-2F	P2V-6	LU-16C	UF-1L
						MP-2F	P2V-6M	TU-16C	UF-1T
Current	Former	FIGHTER		HELICOPTER		TP-2F	P2V-6T	HU-16D	UF-2
RC-45J	SNB-5P					P-2G	P2V-6F	HU-16E	UF-2G
TC-45J	SNB-5	Current	Former	Current	Former	YP-2H	Y/P2V-7		
C-47H	R4D-5	F-111B	TFX	UH-1E	HU-1E	P-2H	P2V-7	AIRSHIP	
EC-47H	R4D-5Q	F-1C	FJ-3	UH-2A	HU2K-1	SP-2H	P2V-7S	Current	Former
LC-47H	R4D-5L	DF-1C	FJ-3D	UH-2B	HU2K-1U	LP-2J	P2V-7LP	EZ-1B	ZPG-2W
SC-47H	R4D-5S	MF-1C	FJ-3M	YSH-3A	Y/HSS-2	YP-3A	Y/P3V-1	SZ-1B	ZPG-2
TC-47H	R4D-5R	DF-1D	FJ-3D2	SH-3A	HSS-2	P-3A	P3V-1	EZ-1C	ZPG-3W
VC-47H	R4D-5Z	YF-1E	Y/FJ-4	VH-3A	HSS-2Z				
C-47J	R4D-6	F-1E	FJ-4						
EC-47J	R4D-6Q	YAF-1E	YFJ-4B						
LC-47J	R4D-6L	AF-1E	FJ-4B						
SC-47J	R4D-6S	F-2C	F2H-3						

Rules on Dual Compensation Which Affect Retired Officers

ONE PROBLEM faced by many officers when considering retirement is the restrictions placed upon their activities by the Dual Employment Act of 1894 and the Dual Compensation Act of 1932. It is often necessary to plan carefully to avoid violating one or more of the legal restrictions placed upon your employment after you retire.

These restrictions are notably applicable to retired Regular Navy officers, especially those retired for years of service. You would do well to try to become familiar with the restrictions likely to affect you, obtain expert advice in case of doubt, and then try to live within these limitations.

Here is a summary of these two Acts, as prepared by CDR W. E. Neely, USN, of the Office of the Judge Advocate General.

These restrictions DO NOT, of course, apply to retired enlisted personnel.

The **Dual Employment Act of 1894** (5 USC 62) generally prohibits retired Regular officers, retired for years of service, including commissioned and noncommissioned warrant officers, from accepting regular employment with the Federal Government, if either retired pay or the pay from the civilian position amounts to or exceeds \$2500 per year.

This statute, which is of lifetime duration, cannot be avoided by waiving retired pay for the period of employment. The Dual Employment Act does not apply to retired enlisted personnel retired for any cause, and does not apply to a member retired as an enlisted person and subsequently advanced on the retired list to officer status. However, members with enlisted status who are retired as officers under a statute relating to the retirement of officers, such as 10 USC 6323, are no longer in an enlisted status and are subject to the Dual Employment Act.

This Act does NOT apply to officers of the Regular Navy retired for physical disability nor to retired Reserve officers. It does not apply to an office or position filled by Presidential appointment confirmed by the Senate. It does not apply to temporary employment when employment is temporary from its beginning.

It does not apply to employment with a non-appropriated fund activity, such as a Navy Exchange or an officers' mess (open). It does not apply to the employment of retired officers by the National Aeronautics and Space Administration (NASA), by the Atomic Energy Commission, by the Agency for International Development (AID), to employment as a Peace Corps volunteer, to the employment of a limited number of officers by the Central Intelligence Agency, or to the employment of retired officers in certain specialized positions by other specified Federal agencies.

In almost every instance, however, the retired officer permitted to accept employment as an exception to the Dual Employment Act will nevertheless still be subject to the total income restrictions contained in the Dual Compensation Act, discussed below.

The **Dual Compensation Act of 1932** (5 USC 59a) restricts the total combined income derived by a retired Regular officer from a Federal position and from retired pay to \$10,000 per year. If the compensation from a Federal civilian position exceeds \$10,000 per year the retired Regular officer may retain his entire civilian compensation but must waive his entire retired pay during the period of his Federal civilian employment, following which his Navy retired pay will be resumed.

Generally speaking, the Dual Compensation Act applies to all retired Regular officers receiving pay on account of commissioned service, in-

cluding permanent enlisted personnel advanced on the retired list to commissioned grade. The Act is not applicable to retired enlisted members not drawing retired pay as commissioned officers; nor to any retired warrant officers, W-1, 2, 3 or 4; nor to any retired Reserve officer.

It does not apply in the case of an officer retired for disability either (1) incurred in combat or (2) caused by an instrumentality of war during a period of war.

Legislation to repeal the Dual Employment Act and to increase the monetary limitation of the Dual Compensation Act was introduced in the last session of the Congress but was not enacted.

Other restrictions—A retired Regular officer, retired for any cause, is restricted by 5 USC 59c, as amended by Public Law 87-777, approved 9 Oct 1962, for a period of three years after retirement from selling any supplies or war materials to any agency of the Department of Defense, the Coast Guard, the Coast and Geodetic Survey or the Public Health Service, upon penalty of loss of retired pay while so engaged during the prohibited period. The term "selling" is defined in DOD Directive 5500.7 of 12 Dec 1961, which was promulgated to the Navy by SecNav Inst. 5370.2A. The term "supplies and war materials" includes virtually every item of tangible personal property, but does not extend to engineering and other professional services. The statute applies to all retired Regular officers, including all grades of Regular warrant officers and former enlisted members retired under statutes relating to officers.

An obscure provision appearing in the criminal statutes, 18 USC 281, has been interpreted as a positive prohibition proscribing a retired Regular officer "from representing any person in the sale of anything to the Government through the Department in whose service he holds a retired status." No authoritative definition is available as to what activities would be included in the term "selling" as employed in this statute, nor as to what items are embraced in the word "anything." So far as can be determined, only one case has been prosecuted under this statute.



"I just happened to be passing by."

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, Instructions and Notices for complete details before taking action.

Alnavs apply to all Navy and Marine Corps commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 43—Revised paragraph five of Alnav 40.

No. 44—Announced approval by the President of the report of selection boards which recommended temporary promotion of line officers to the grade of lieutenant commander.

No. 45—Directed that the national ensign be half-masted by all ships and stations until sunset 10 November as a mark of respect for Mrs. Eleanor Roosevelt.

No. 46—Conveyed a Thanksgiving message from the Secretary of the Navy.

No. 47—Announced the release of personnel extended under Alnav 39.

No. 48—Canceled Alnavs 40 and 43.

No. 49—Reminded commanding officers that "Q" allotments were discontinued and that "D" allotments must be made by 21 December.

Instructions

No. 1050.2D—Provides information concerning the conditions under which Philippine or Guamanian personnel may visit the Philippines or Guam.

No. 1211.3A—Discusses the identification of officer postgraduate billet requirements.

No. 1520.88—Describes the procedures whereby officers may apply for assignment to the naval nuclear power training program.

No. 1616.6—Discusses the use of personnel classed as conscientious objectors and procedures for processing requests for noncombatant duty assignment or discharge based on conscientious objection.

No. 1620.1C—Discusses the policy

concerning support of dependents and paternity complaints.

Notices

No. 1440 (25 October)—Reemphasized the Selective Training and Retention program (STAR) and Selective Conversion and Retention program (SCORE).

No. 1412 (29 October)—Announced the fiscal year 1963 Naval Reserve officer promotion zones and selection boards.

No. 1430 (29 October)—Announced the selection of personnel to aviation antisubmarine warfare technician (AX) and provided procedures for change in rating.

No. 1220 (5 November)—Established a means of recognizing personnel qualified as aircrewmembers.

No. 1430 (6 November)—Announced the advancements to senior chief and master chief petty officer.

No. 1520 (10 November)—Announced the selection of officer applicants for submarine training.

No. 7220 (16 November)—Brought to the attention of commanding officers their responsibility to counsel enlisted personnel being detached on permanent change of station orders concerning the hazards of drawing excess advances of pay.

No. 1520 (21 November)—Invited applications from Supply Corps officers for assignment to the Subsistence Technology Course at the U. S. Army Quartermaster School, Fort Lee, Va., and the Transportation Management Course at the U. S. Naval School, Oakland, Calif.

Navy Publishes Handbook On Space Navigation

The Navy now has a manual for space navigators. It's the *Space Navigation Handbook* (NavPers 92988), prepared by the first organized class in space navigation, which convened at the U. S. Naval Academy in July 1961.

The handbook is not part of a regular Navy training course. It was designed originally as a textbook for four weeks of introductory space navigation training at the graduate level, and has proved very useful as a reference book in appropriate NROTC, OCS and Reserve officer education programs.

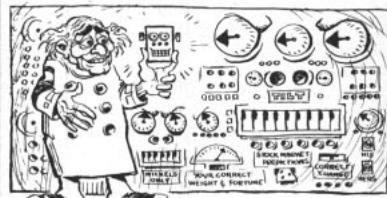
In highly condensed fashion the handbook explains problems of astronomy, physics, space flight technology and of space navigation.

The Navy, and other armed forces, are using more and more electronic gear. As this equipment is required to do bigger and better things, it gets heavier and heavier and occupies more and more space. Anyone who has even casually walked by a computer installation can testify to that.

What the Navy (and everybody else) needs is electronic gear that is more dependable, performs better, costs less, weighs less and occupies less space than the equipment now in use.

One Navy organization devoted to this task is located in Indiana. It is the U. S. Naval Avionics Facility, Indianapolis (NAFI).

NAFI, working closely with other Navy laboratories, has studied a number of microelectronics techniques, among which is something NAFI men call integrated thin film circuitry (electric circuits on film) which, they think, will do the work (with the help of diodes and transistors) of numerous vacuum tubes and many feet of wire.



They believe this will be the first microelectronics technique to be widely used in military equipment.

The film can be used in most military equipment, and its applications are numerous. This is not to imply that even film circuitry is simple. It is simply less complicated than conventional circuitry now in use.

BuWeps has attempted to speed up the availability of microelectronics for military use by contracting the development of the thin film technique to a commercial firm.

In this way, the Navy expects to know soon exactly what materials, machines and controls it will need to manufacture its little wonder.

A guinea pig computer has been developed by NOL, China Lake, for research purposes. This computer is considered a moderately complex piece of equipment which the NAFI men hope to simplify through the use of thin film developed into a computer panel small enough to be held between your thumb and forefinger.

The final product will be a prototype of a general purpose data processor with a memory system which can be programmed to handle a wide variety of problems and other functions which might be required.

Program to Reduce Purchases Abroad Continues, Aimed at Stemming Outward Gold Flow

Expenditures for support of the U. S. military establishment abroad constitute the largest single deficit item in the United States balance of payments. As you will recall, back in November 1960, in order to help the nation's unfavorable position relative to balance of payments, the President directed that the number of dependents of military personnel overseas be reduced by one-third.

Later, that portion of the order which related to reduction of dependents overseas was rescinded, on assurance from DOD that the reduction in overseas expenditures could be accomplished in other ways. In October 1961, in connection with the Berlin crisis, travel of dependents to western Europe was again banned. After the lessening of the crisis in Berlin, the ban on dependents' travel was continued as part of the effort to reduce the flow of gold out of the United States.

In April 1962, this ban was rescinded, on condition that certain units be rotated on a unit basis without authorization for dependents' travel; that the expenditure of funds for goods and services overseas be severely curtailed; and that personal expenditures entering the balance of payments be reduced to \$100 per year per member overseas.

There are numerous plans to reduce the expenditures of individuals. Some of them are mandatory; however, because of the general and marked desire on the part of military personnel and their dependents to

cooperate in every possible way toward improving the nation's balance of payments situation, most of the plans are based on voluntary reductions in expenditures by individuals.

The over-all objective in the overseas personal expenditure reduction program is an annual reduction in expenditures of approximately \$135 million.

As part of this program each person overseas under the sponsorship of the Department of Defense is requested to limit his expenditures for foreign goods to items which:

- Are purchased in an Exchange outlet or other approved United States military operated resale activity, and then only to goods for which a real need exists.

- Are required for the use of the individual or his household incident to his duty overseas and a reasonable substitute cannot be procured from an Exchange outlet or from the United States.

- If not covered under the above, do not exceed a total cost of \$100 per year for each individual overseas.

In addition, the transportation, at government expense, of any foreign-made motor vehicle purchased by Department of Defense personnel or their dependents overseas or for delivery overseas is prohibited unless (this is not applicable to vehicles purchased in Alaska, Hawaii, Virgin Islands, Guam, Midway, Puerto Rico, Wake Island, American Samoa or the Canal Zone by personnel regularly stationed there):

- Owned or on order on 6 Mar 1961.

- Adequate facilities do not exist for the maintenance and repair of motor vehicles produced and assembled in the United States. The places listed as exceptions because of lack of facilities to take care of American cars are: Bermuda (within limitations of Bermuda law), Indonesia, Hungary, Cyprus, Republic of the Congo, Eritrea, Bulgaria, Yugoslavia, Afghanistan, Malta, Poland, Ceylon, Malagasy Republic, Ireland and the area in proximity of Holy Loch, Scotland (Argyll County and Gourock-Greenock Township).

In addition, each person is urged to establish a savings program through an allotment from his pay. These savings may take such forms as a savings bond allotment or an

allotment to a savings bank. Whatever the form of saving selected, the adverse flow of gold would continue unless these funds are left in the account until the member's return to the States. It should be noted that an allotment of as little as \$8.50 a month, will build up a savings account of more than \$100 a year. For those who already have effective savings allotments of some type, an increase in the allotment in the amount of \$100 per year is urged.

Many service personnel and their dependents have suggested that restrictions should be placed on the travel of tourists abroad. In response to this specific question, the President on 22 Aug 1962 stated, "I think it is very difficult for a good many servicemen to understand the difference between the burdens and obligations placed on those in the public service and the freedom which is available in private life. . . . We are asking the servicemen to accept this sacrifice . . . and we are hopeful, however, as I have said before, that by the end of 1963 we will have brought our balance of payments into sufficient balance to permit American troops greater freedoms than they now have in this regard."

If you are thinking of buying U. S. Savings Bonds, some valuable tips may be found in the July 1962 issue of ALL HANDS, page 49.

Also, the Navy makes available to you, if you are an enlisted man serving on active duty for six months or longer, one of the best savings methods around; the Navy Savings Deposit Program. For further details, see page 51 of the May 1961 issue of ALL HANDS.



"Wonder where on earth all that junk came from."



"Driving an unlicensed vehicle on a naval base!"

This Will Give You Some Idea of Your Chances of Advancement

IF YOU'RE EYEING the calendar in uneasy anticipation of the advancement in rating exams to be held next month, here's a tip from testing authorities. Relax and focus your spare time attention on the appropriate Navy training course blue books. If you pass your exam with a high enough score, and there is room in your rating for you to move up, you will be advanced.

Opportunities for advancement are best, logically enough, in ratings that have the most vacancies. As of this writing, estimates of each rating's advancement opportunities for the February 1963 exams had not been compiled. However, the facts and figures of last February's exams may give you some idea of advancement odds for this year (see table).

A prelude to the actual exam, as you know if you're going to take one this year, is the various eligibility requirements you must fulfill before you can participate. If you haven't completed the eligibility requirements already, time's running out. All but one of the requirements, as you'll see here, must be met at least one month before exam date. You would do well to review your advancement requirements from time to time to make sure you are eligible. Men have been known to be turned back on examination day because they unwittingly failed to meet one or more advancement eligibility requirements.

Before you can participate in the advancement exams you must be recommended by your commanding officer; complete all the practical factors required for the higher rating; complete the required Navy training courses; and complete any required performance tests. If your rating requires the completion of service school, you must have been graduated from the school before you can be recommended. Also, the rating you seek must be in the proper path of advancement, and you must have fulfilled the time in service and time in pay grade requirements. Here's a closer look at each:

- **Recommendation**—Your CO's recommendation is well considered. You are recommended only if you have the ability to perform the work and carry the responsibilities of the higher rating. This recommendation may be

withdrawn at any time before actual advancement.

- **Practical Factors**—These are the skills and abilities required for advancement which can best be demonstrated by your performance before you take an advancement exam. As you demonstrate your knowledge, a qualified officer or senior petty officer makes a record. Practical factors vary for different rates and ratings. They are all listed in the *Manual of Qualifications for Advancement in Rating* (NavPers 18068—Revised).

- **Navy Training Courses**—Appropriate Navy training courses for your rating are based on the qualifications you must have. The current edition of *Training Publications for Advancement in Rating* (NavPers 10052) lists the correspondence courses you must complete before you are permitted to take the advancement exam. If you have been graduated from class A service school you are credited with satisfying the requirements for completion of Navy training courses for E-4.

Certain schools have been authorized to assign striker designations to

graduates. If you have a school-assigned striker designation, you are considered to have met your rating's training course requirements for pay grade E-4. Successful completion of a class B school may be considered as satisfying the requirements for completion of the training courses for E-6.

- **Performance Test**—The *Manual of Qualifications for Advancement in Rating* lists the performance tests required for certain ratings. If a performance test is required for your rating, you must complete it before you can take the advancement exam.

- **Service School**—At present, only men who wish to advance to the following ratings are required to attend the appropriate A, B, or Fleet service schools: PR3, DT3, MNCA, MUCA, AGCA, PT3, HM3 and AME3. The latter two ratings will be included in a forthcoming change to BuPers Inst. P1430.7D.

- **Proper Path**—Advancements may be made only to the next higher pay grade in the rate that is in the proper path of advancement. If you're a PN3, the proper path of advance-

What's On at the Movies?

Sitting on the fantail, or in a darkened mess hall or wardroom, watching a picture projected on a beam of light which dances through clouds of blue-gray smoke is as much a part of Navy life as bean soup and the bosun's pipe.

Since the first shipboard movie was shown, the Navy has consumed a large portion of Hollywood's production.

The motion pictures are distributed through more than 30 Navy motion picture exchanges throughout the world, on a first-come, first-served basis.

Although movies are screened for entertainment value, any Navyman will tell you that some of the pictures he sees are less than Academy Award winners. This, however, shouldn't cause any gnashing of teeth or rending of garments, for the Navyman's chances of seeing a really good picture are better than those of the average civilian

moviegoer, whether on ship or shore.

Each week, four of Hollywood's best new pictures are placed into circulation and four oldies are retired. Sixteen prints of each picture selected are distributed.

Movies are shown on all Navy ships (including MSTs) and ships belonging to the Coast Guard and the Coast and Geodetic Survey Service. Navy, Marine Corps and Coast Guard shore activities overseas also get movies.

Navymen see all kinds — movies made for small and wide screens, in black and white, and in glorious (or is it exciting?) color.

Most of the money for movies comes out of funds derived from the operation of Navy Exchanges and ship's stores.

Each year, nearly three million dollars are spent to provide Navymen with their daily motion picture fare.

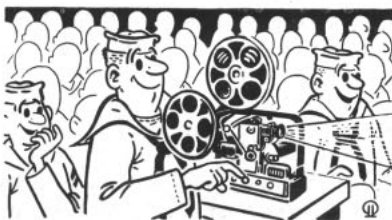


Table Shows How Many Who Passed Exams Advanced

Here's a roundup of statistics from the February 1962 advancement in rating exams. In many ratings, all passing the exams were advanced.

Rating Group I	E-4		E-5		E-6		E-7	
	Passed	Advanced	Passed	Advanced	Passed	Advanced	Passed	Advanced
BM	1746	1569	1084	644	747	590	312	312
QM	577	577	351	351	108	108	151	151
SM	545	545	272	246	147	147	137	137
RD	1182	1182	721	721	177	177	182	182
SO	—	—	—	—	96	96	88	88
SOA	60	60	36	36	—	—	—	—
SOG	464	464	300	300	—	—	—	—
SOS	83	83	49	49	—	—	—	—
SOO	59	59	44	44	—	—	—	—
Group II								
TM	410	410	298	298	179	138	110	110
GMM	39	39	19	12	43	43	14	14
GMG	1245	1245	694	645	441	441	194	194
GMT	126	126	134	134	29	29	39	39
FT	—	—	—	—	—	—	189	189
FTG	729	729	511	511	85	85	—	—
FTM	123	123	60	60	33	33	—	—
MT	257	257	156	156	22	22	35	35
MN	47	21	58	15	61	18	27	15
Group III								
ET	—	—	—	—	213	213	300	300
ETN	925	925	645	645	—	—	—	—
ETR	884	884	552	552	—	—	—	—
DS	—	—	—	—	3	3	10	10
Group IV								
IM	66	23	36	26	12	5	8	4
OM	58	58	35	35	10	10	8	8
Group V								
RM	1665	1665	879	879	369	369	419	419
CTA	84	84	57	57	23	23	55	55
CTM	70	70	75	75	19	19	19	19
CTO	64	64	47	47	26	26	45	45
CTR	200	200	152	152	75	75	101	101
CTT	71	71	66	66	24	24	17	17
YN	1939	1939	999	855	475	475	426	426
PN	1115	1115	489	416	323	258	240	240
MA	198	198	111	111	46	46	49	49
SK	1687	1687	747	569	476	256	299	188
DK	367	367	192	192	161	98	102	72
CS	1025	1025	1082	459	840	509	372	140
SH	—	—	—	—	403	136	275	124
SHB	161	161	140	67	—	—	—	—
SHC	15	15	17	7	—	—	—	—
SHL	587	587	378	176	—	—	—	—
SHS	42	42	27	12	—	—	—	—
SHT	19	19	24	11	—	—	—	—
JO	125	125	57	57	12	12	9	9
PC	290	199	88	25	47	4	52	5
Group VI								
LI	109	109	35	17	24	4	26	11
DM	139	139	52	52	14	14	18	4
MU	184	184	107	77	33	33	15	15
Group VII								
MM	2374	2374	1603	1603	446	446	378	378
EN	1541	1541	992	648	656	229	440	290
MR	376	376	268	268	73	73	72	32
BT	1452	1452	891	891	307	307	310	310
BR	—	—	—	—	4	4	13	13
EM	1630	1630	1071	1071	408	408	382	382
IC	1061	1061	667	667	126	126	65	65
SF	—	—	—	—	408	216	289	230
SFM	519	519	337	294	—	—	—	—

(Cont. on next page.)

ment is to PN2. If you're a designated striker, you may advance only to the rating of your striker identification. (Exceptions to the proper path procedure, such as authorized changes in rating, are spelled out in BuPers Inst. P1430.7D.)

• **Service**—The minimum time in service and pay grade requirements for advancement are:

Pay Grade	Time Requirements
E-1 to E-2	No specified time for advancement; may be effected upon completion of recruit training; otherwise four months' naval service.
E-2 to E-3	6 months in pay grade E-2.
E-3 to E-4	6 months in pay grade E-3.
E-4 to E-5	12 months in pay grade E-4.
E-5 to E-6	24 months in pay grade E-5.
E-6 to E-7 (acting)	36 months in pay grade E-6.
E-7 to E-8	48 months in pay grade E-7, and minimum total service of 11 years, 8 years of which must be enlisted service.
E-8 to E-9	24 months in pay grade E-8, and minimum total service of 13 years, 10 years of which must be enlisted service.

The time in service and time in pay grade requirements must be met before the terminal eligibility date—the 16th day of the third month following exam month. In other words, 16 November (for August exams) and 16 May (February exams).

These time requirements are the only ones that may be met after the exam date. All of the other requirements must be fulfilled at least one month before the date of examination.

Exams for E-8 and E-9 are held once a year on the first Tuesday in August. Final determination of those to be advanced is made by a selection board which convenes annually in September. Personnel selected for the senior and master chief grades must pass a physical examination before accepting their promotions.

If you are selected for E-8, you must, before accepting advancement, agree to remain on active duty for two years from date of advancement. For E-9s, the obligated service requirement is three years.

Exams for E-7 are conducted once each year in February. The exams for E-4 through E-6 are held twice a year, each February and August. Normally you can look ahead and know on exactly which day your

exam will be conducted. Customary exam days are:

First Tuesday in August	E-8/E-9
First Thursday in August	E-6
Second Tuesday in August	E-5
Second Thursday in August	E-4
First Tuesday in February	E-7
First Thursday in February	E-6
Second Tuesday in February	E-5
Second Thursday in February	E-4

All advancements to pay grades E-4 through E-9 are subject to quota controls. Quotas are administered on a Navywide basis, determined by the Chief of Naval Personnel after a thorough study of vacancies in each rating and the maximum number of additional petty officers that can be supported within the authorized enlisted strength.

Except for E-8 and E-9, the determination of who will be advanced within quota limitations is based on final multiple standings. The E-8 and E-9 selection board determines which men may be advanced to the senior and master chief grades within quota limitations.

Occasionally, quotas are divided into increments, or groups with different advancement dates, in order to up in grade a maximum number of candidates. The increments are based on final multiple standings of those who pass the exams.

Your command is notified of the results of your exam by letter from the Commanding Officer, U. S. Naval Examining Center. Except for the E-7, E-8, and E-9 grades, the notification will name the personnel whose final multiple scores were high enough to place them within the quota for advancement.

Those who advance to E-7 are notified by a BuPers Notice in the 1430 series. Also, a BuPers Notice in the 1430 series lists candidates who are selected for E-8 and E-9.

The last Navywide advancement exams were conducted in August 1962 for pay grades E-4 through E-6, and E-8 and E-9. Letters from the Naval Examining Center authorizing the advancement (on 16 Nov 1962) of more than 60,000 Navymen and women to grades E-4, E-5, and E-6, were sent to all commands.

The E-8 and E-9 exams of last August resulted in 2681 Regular Navy chiefs (E-7 and E-8) selected for master and senior grades. These selections were announced in BuPers Notice 1430 of 6 Nov 1962.

Here's How Many Passed and Advanced (Cont.)

Rating Group VII	E-4		E-5		E-6		E-7	
	Passed	Advanced	Passed	Advanced	Passed	Advanced	Passed	Advanced
SFP	499	499	309	124	—	—	—	—
DC	435	435	213	156	240	120	127	114
PM	51	16	19	9	4	4	3	3
ML	31	31	14	10	13	7	7	7
Group VIII								
EA	—	—	—	—	5	5	2	2
EAD	14	14	11	11	—	—	—	—
EAS	47	47	19	19	—	—	—	—
CE	—	—	—	—	25	25	30	30
CEP	42	42	21	21	—	—	—	—
CES	6	6	9	9	—	—	—	—
CET	18	18	14	14	—	—	—	—
CEW	69	69	51	51	—	—	—	—
EO	—	—	—	—	137	21	84	42
EOH	73	73	90	45	—	—	—	—
EON	116	116	115	5	—	—	—	—
CM	—	—	—	—	72	29	57	26
CMA	57	57	68	24	—	—	—	—
CMH	35	35	34	26	—	—	—	—
BU	—	—	—	—	47	47	75	37
BUH	21	21	18	18	—	—	—	—
BUL	180	180	97	97	—	—	—	—
BUR	62	62	40	40	—	—	—	—
SW	—	—	—	—	29	6	19	3
SWE	26	26	14	14	—	—	—	—
SWF	27	27	11	11	—	—	—	—
UT	—	—	—	—	47	16	31	7
UTA	20	20	13	6	—	—	—	—
UTB	10	10	9	9	—	—	—	—
UTP	66	66	50	13	—	—	—	—
UTW	12	12	15	15	—	—	—	—
Group IX								
ADJ	1002	1002	867	867	292	292	128	128
ADR	1048	1048	1192	1192	729	729	373	373
AT	—	—	1719	1719	394	394	299	299
ATN	752	752	—	—	—	—	—	—
ATR	405	405	—	—	—	—	—	—
ATS	161	161	—	—	—	—	—	—
ATW	66	66	—	—	—	—	—	—
AO	576	576	363	363	227	227	109	109
AQ	—	—	170	170	45	45	43	43
AQB	73	73	—	—	—	—	—	—
AQF	121	121	—	—	—	—	—	—
AC	300	300	273	226	168	124	126	82
ABE	276	58	143	45	59	47	43	43
ABF	279	163	105	105	51	44	35	35
ABH	498	498	167	167	72	72	42	42
AE	825	825	682	682	257	257	249	249
AME	300	300	164	23	23	23	26	26
AMH	711	711	635	474	169	169	187	187
AMS	1077	1077	593	593	181	181	137	137
PR	117	117	98	98	96	76	62	21
AG	318	318	206	206	55	55	56	35
TD	254	203	176	80	123	50	76	45
AK	642	642	349	307	182	98	143	50
PH	358	358	212	212	128	83	85	25
PT	31	31	16	16	16	8	11	11
Group X								
HM	2835	2009	1288	1078	770	536	490	490
Group XI								
DTG	264	164	128	76	81	48	46	46
DTP	40	40	39	26	44	13	33	23
DTR	—	—	—	—	8	2	11	2
Group XII								
SD	2411	264	992	184	554	248	216	88

List of New Motion Picture And TV Series Available To Ships and Overseas Bases

The latest list of 16-mm feature movies and TV series available from the Navy Motion Picture Service is published here for the convenience of ships and overseas bases.

Two one-hour TV shows are packaged together for a 108-minute program, but may be shown only aboard ship. TV series available for selection are: *Target—The Corruptors*; and *The Detectives*—melodramas.

Motion Pictures

The 300 Spartans (2122) (C) (WS): Drama; Richard Egan, Diane Baker.

Two Tickets to Paris (2123): Musical; Joey Dee, Gary Crosby.

Hatari (2124) (C): Adventure Drama; John Wayne, Red Buttons.

The Frightened City (2125): Melodrama; Herbert Lom, Yvonne Romain.

The Story of the Count of Monte Cristo (2126) (C) (WS); Drama; Louis Jourdan, Yvonne Furneaux.

The Trojan Horse (2127) (C) (WS): Melodrama; Steve Reeves, Juliette Mayniel.

The Valiant (2128) (WS): Drama; John Mills, Ettore Manni.

Two and Two Make Six (2129): Melodrama; George Chakiris, Janette Scott.

King of Kings (2130) (C) (WS): Biblical Drama; Jeffrey Hunter, Robert Ryan.

The Mighty Ursus (2131) (C) (WS): Melodrama; Ed Fury, Cristina Gajoni.

Then There Were Three (2132): Drama; Frank Latimore, Alex Nicol.

Make Way for Lila (2133) (C): Adventure Drama; Erika Remberg, Joachim Hansen.

I Thank a Fool (2134) (C) (WS): Drama; Susan Hayward, Peter Finch.

No Man is an Island (2135) (C): Drama; Jeffrey Hunter, Marshall Thompson.

Tower of London (2136): Melodrama; Vincent Price, Joan Freeman.

Damon and Pythias (2137) (C): Drama; Guy Williams, Don Burnett.

Television Programs

5301: TV-1 *Target—The Corruptors*—A Book of Faces. TV-2 *The Detectives*—Legend of Jim Riva.

5302: TV-1 *Target—The Cor-*

ruptors—Yankee Dollar. TV-2 *The Detectives*—Tobey's Place.

5303: TV-1 *Target—The Corruptors*—Bite of a Tiger. TV-2 *The Detectives*—Beyond a Reasonable Doubt.

5304: TV-1 *Target—The Corruptors*—A Man Waiting to be Murdered. TV-2 *The Detectives*—The Outsider.

5305: TV-1 *Target—The Corruptors*—A Man's Castle. TV-2 *The Detectives*—Act of God.

Suggestions for Chiefs Preparing for E-8 and E-9

A reminder for CPOs preparing for the next E-8 and E-9 exams: Don't count on your test to be simply a rehash of professional matters on which you were quizzed as an E-4, E-5, or E-6. You'll probably find your senior or master chief exam is a lot tougher than any you've taken in the past.

The exams for the super ratings will not be given until August, but it's not too early to start preparing.

In the time it takes to become eligible for a senior or master chief rating you are considered to have attained a high degree of skill. But your assumed competence doesn't let you off the hook for exam purposes—your professional knowledge is tested with advanced questions.

The Navy wants its senior and master chiefs to be verbally proficient, capable of thinking in quantitative terms, and capable of understanding the basic principles of problem formation. As a result, your general aptitude and reasoning ability are questioned.



"I'm thirsty."

And, your supervisory and leadership qualifications are put to the test as they seldom are in lesser exams.

Senior and master chief advancement exams are divided into three sections: Professional, Supervisory, and Common Knowledge. The exams are tough, but they are based on written material which is available to all candidates. Here's a roundup of recommended study material:

Professional—Questions in the Professional section are based on the *Manual of Qualifications for Advancement in Rating* (NavPers 18068—Revised) and related training publications of the NavPers 10052 series.

Supervisory—Leadership and supervisory type questions are developed from pertinent chapters (or articles) of publications listed in the military requirements sections of training publications (NavPers 10052 series).

Common Knowledge—To test your general aptitude, the Common Knowledge section concentrates on your arithmetical, mechanical, and verbal reasoning capabilities. Questions are taken from basic mathematics, physics, and vocabulary development texts.

In addition, exam writers recommend the following:

- Study material for college entrance examinations.
- High School Subjects Self Taught book.
- Basic mathematics.
- Specialty handbooks.
- Mathematics review.
- Popular Psychology books.
- Appropriate USAFI publications.
- Vocabulary development books.

Your Navy library or station or ship Information and Education office should be able to provide you with the study material best suited to your needs.

A final tip: Your exam score is only one of a number of considerations made by the E-8 and E-9 selection boards. Your performance in the exam is mighty important, but a high score does not insure advancement. Your service record is reviewed for performance marks and evaluations by your CO. Your chances for selection are increased if you have a history as a capable leader and administrator.

DECORATIONS & CITATIONS



LEGION OF MERIT

"For exceptionally meritorious conduct in the performance of outstanding service to the government of the United States . . ."

Gold Star in lieu of Second Award

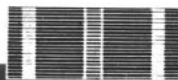
★ FOLSOM, Parker L., CAPT, USN, for the performance of outstanding services from January 1958 to August 1962 while serving in the Development Programs Division, Office of the Deputy Chief of Naval Operations (Development). During this period, CAPT Folsom, in addition to other demanding duties in connection with the development of the Navy's operations control centers, communication systems and electronics warfare systems and equipment, served in the highly important capacity of project officer for the development of the revolutionary Navy Tactical Data System (NTDS). This project has produced a computerized network which increases the accuracy and tactical data handling capacity of the naval command control system manifold and, at the same time, lightens the burden heretofore borne by the commander involved.

Gold Star in Lieu of Second Award

★ NATION, William M., RADM, USN, for outstanding service as Deputy Commandant, Armed Forces Staff College, from June 1960 to June 1962. Instrumental in effecting the first major reorganization of the faculty of the Armed Forces Staff College in 1961, RADM Nation was highly successful in carrying out his responsibilities throughout this period. Through his close, personal knowledge of world problems, he made a marked contribution toward the revision of certain aspects of the Armed Forces Staff College curriculum and, in particular, toward the introduction of a new major unit of instruction on southeast Asia. In fostering the harmonious integration of naval students with those of other services and of our NATO allied observers, he consistently displayed judgment and diplomacy of a high order.

★ WEISS, Arnold, CDR, SC, USN, for the performance of outstanding service from 23 Dec 1957 to 31 Dec 1961 while serving with the Military Medical Supply Agency, and from 1 Jan 1962 to 1 Oct 1962 while serving with its suc-

cessor activity, the Defense Medical Supply Center. Adhering to the highest standards of personal and professional conduct, CDR Weiss, as Director of the Purchase Department during these periods, displayed exceptional skill as a negotiator in extremely complex procurements of medical supplies for all elements of the Department of Defense and, when requested, for other government agencies and departments. Despite the continuous pressure directed at him by the majority of the leading manufacturers of a major industry, he consistently exercised fortitude and an unremitting devotion to duty as guardian of the public monies entrusted to his expenditure, resulting in direct savings to the government of millions of dollars. In addition, through his expert testimony before a federal grand jury and in a Federal Trade Commission hearing, his assistance to committees of the Congress, and his personal intercession with the heads of many of the large corporations with which he dealt, he was instrumental in bringing about a basic change in the industry's pricing policies which should ensure continued savings to the Department of Defense and to other departments of the government of the United States.



DISTINGUISHED FLYING CROSS

"For heroism or extraordinary achievement in aerial flight . . ."

★ CHANCE, Robert W., LTJG, USNR, for extraordinary achievement while participating in aerial flights on assigned missions during the Cuban crisis.

★ DAY, Arthur R., LT, USN, for extraordinary achievement while participating in aerial flights on assigned missions during the Cuban crisis.

★ FEEKS, Edmond M., LT, USN, for extraordinary achievement while participating in aerial flights on assigned missions during the Cuban crisis.

★ HALLCOM, Terry V., LTJG, USNR, for extraordinary achievement while participating in aerial flights on assigned missions during the Cuban crisis.

★ KELT, William N., LT, USN, for extraordinary achievement while participating in aerial flights on assigned missions during the Cuban crisis.

★ TAYLOR, William L., LTJG, USNR, for extraordinary achievement while participating in aerial flights on assigned missions during the Cuban crisis.



NAVY AND MARINE CORPS MEDAL

"For heroic conduct not involving actual conflict with an enemy . . ."

★ GREENWOOD, Jay C., FA, USNR, for heroic conduct on the night of 11 Jul 1962 while serving with the U. S. Naval Training Center, Great Lakes, Ill. Hearing cries for help emanating from the vicinity of the outer south breakwater area, Greenwood, although unable to sight the person in distress because of darkness, dived into the water and swam through one- to two-foot waves in the general direction of the cries until he succeeded in locating and towing to safety a young woman who was fully clothed and struggling to stay afloat. Through his prompt actions in an emergency, Greenwood was directly responsible for saving a life.

★ PEARSTON, David L., HN, USN, for heroic conduct in saving the life of a swimming companion at Oceanside Municipal Beach, Oceanside, Calif., on 6 May 1962. Hearing cries for help from a companion who was caught in the strong undercurrent, dragged beneath the water and swept seaward, Pearston swam to the side of the nearly exhausted victim and, despite the choppy seas and treacherous undertow, managed to bring him to the safety of the beach, where both men collapsed from exhaustion. Pearston's skill, courage and perseverance in the face of grave personal risk were in keeping with the highest traditions of the U. S. naval service.

★ ZEGERS, David L., AD2, USN, for heroic conduct on the night of 23 Dec 1961 while on authorized liberty from USS Midway (CVA 41). Proceeding to his hotel room in Oakland, Calif., when he observed a man with a rifle threatening three women from the open doorway of their room, Zegers calmly approached the man, who was obviously unbalanced, engaged him in conversation, and succeeded in coaxing him from the room into a service elevator, stepping out as the elevator door closed. Zegers then notified the management of the situation and, upon learning that the armed man had inquired at the desk for the manager and had returned to the upper floors, quickly rushed back to the room occupied by the three women, remaining there until the police arrived and apprehended the deranged man.

BOOKS

ALMOST ANYTHING GOES IN THIS MONTH'S SELECTIONS

BY THIS TIME, you should know just about everything about destroyers. (See *ALL HANDS* destroyer issue, September 1962, and subsequent issues.) If you still have gaps in your knowledge, this can be remedied by reference to *Destroyers—60 Years*, by CAPT William G. Schofield, USNR. This is a story of action with North Atlantic convoys and off South Pacific beachheads; of hunter-killer groups and antisubmarine warfare; of shore bombardment and amphibious support. As might be expected, the continuity runs from the first *Bainbridge* to the last, nuclear-powered ship of the same name. More than 100,000 official Navy photographs were screened and some 200 of the best were selected for inclusion in the book. Destroyermen will get a bang out of this one and men of other type ships might learn something new.

The other ship types are also well represented this month. *Around the World Submerged*, by CAPT Edward L. Beach, USN, tells about one of our more favorite submarines and *The Big "E"*, by CDR Edward P. Stafford, recounts the career of a likewise favorite carrier.

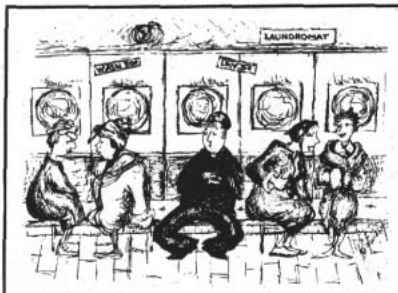
By this time, almost everyone knows of the voyage of *uss Triton* around the world while submerged but not too many know that this was her shakedown cruise. Two weeks before the scheduled run, CAPT Beach was called to Washington where he was informed that, to secure approval from Congress for the *Polaris* program, the Navy would have to prove, beyond a doubt, the reliability of the FBM sub. Therefore, instead of the normal cruise in home waters, he would take *Triton* around the world submerged. CAPT Beach doesn't say so, but we are reasonably sure that, when he left the conference, he had the feeling that if his trip were to fail, it would be much better if he were to keep right on going and not come back. Obviously, the trip didn't fail, but there were plenty of cliffhangers en route. As anyone knows who has read *Run Silent, Run Deep* or *Submarine!*, CAPT Beach is an old pro at the writing business as well as a first-class submariner.

The Big "E" is, of course, the *Enterprise* (CV 6) which did such

a magnificent job during World War II and a natural subject for a biography if ever there was one. Not only do we see her in action (between Pearl Harbor and Okinawa, she took part in almost every Pacific battle—20 out of a possible 22), but we see her pilots scrapping with *Zeros*, bombing enemy ships, hitting the water themselves. Stafford tells with historical accuracy of the terrible hits suffered by *Enterprise* as well as the great sea fights in which she was engaged yet makes it all readable. A most satisfactory treatment of what has been called "the greatest U. S. Navy ship of all times."

Without straining too hard, it might be possible to compare a war with an iceberg—as much goes on below the level of visibility as that which can be seen readily. Which is just an excuse for introducing two below-the-surface yarns; *No Bugles for Spies*, by Robert H. Alcorn, and *Black Boomerang*, by Sefton Delmar. *No Bugles* is the story of the Office of Strategic Services which was, as you know, a World War II phenomenon. This tells how that organization grew (from a pre-war concept that spying just wasn't gentlemanly), the sort of operations and methods it employed, the schemes of financing, and the things it was able to accomplish. Under normal circumstances, operations and financing would not be likely subjects for a thriller, but these were not normal circumstances. The emphasis is on people, not techniques, and the people were a weird collection indeed. By war's end, almost everyone had grasped the idea that, gentlemanly or not, spying was going to be with us for many years to come.

All-Navy Cartoon Contest
R. Karlinsey, SN, USN



"He feels at home here, he's a submarine sailor."

Black Boomerang might be considered a splinter of our earlier, hypothetical iceberg. It's the account of Britain's "Black Radio" operations during World War II. The Black Radio was a phoney. It broadcast messages to the troops and civilians in Germany, purporting to come from undercover stations within Germany itself, loyally German, thoroughly anti-British, but also anti-war. Through these broadcasts, which created and built the myth of the "good" anti-Nazi Wehrmacht, the broadcasters were able to confuse their opponents thoroughly. Actually, all the broadcasts came from a secret station in Britain, fed by secret Intelligence reports. It resulted in propaganda which made that of Goebbels seem crude and childish.

After reading how nations fight for men's minds, *Rendezvous in Space*, by Martin Caidin, is refreshingly honest and straightforward. Caidin tells the story of Glenn's flight last February, but this is almost background for his account of the history of *Project Mercury*, of the disappointments and delays at Cape Canaveral as the *Atlas* rockets were prepared to send Glenn into space. The journey itself is described. Included too, are brief accounts of Gagarin's and Titov's earlier flights, as well as Grissom's suborbital flight last year. As the man says, at present we are "ignorant savages at the edge of a stormy beach."

Had enough of worry and suffering, even though vicarious? Then turn to *Harm's Way*, by James Bassett. It's a blood-and-thunder sea story of World War II, with its protagonist a captain (later admiral) so real that the youngest E-1 will feel a kinship. There's a rousing sea battle (of course!) but throughout the book is a sense of dedication to the service that the E-1 and above would do well to heed. As Bassett implies, admirals have their problems, too. Otherwise, no book.

We've always maintained that facts are usually more interesting than fiction but at times we're not so sure. *Lord Geoffrey's Fancy*, by Alfred Duggan, certainly brings to life the period of 13th Century Greece better than any of the pedants who have previously embalmed the period. Duggan knows the Middle Ages so thoroughly and is so unassuming about his knowledge, that he makes it all sound better than most contemporary fiction—or non-fiction.



THE BIRTH OF SEA POWER

This section of ALL HANDS has regularly been used to publish book supplements or "special supplements" gathered from sources not generally available to the average reader, on subjects of historical importance or interest, pertaining either directly or indirectly to the U. S. Navy.

One of the purposes of these supplements has been to show the role of seapower coping with particular situations at different times in history. The following report expands on this theme, going back to the days of the world's first navies, what they did and how they operated—in other words, how they affected history.

It is planned to follow this report with others, from time to time, on the development of naval power among nations and the lessons learned from them.

Here's a brief account of history's first sea powers.

BY AND LARGE, recorded naval history begins with the battle of Salamis in 480 B.C., during which the Greeks, under the leadership of Athens, decisively defeated the invading Persians.

This is not to suggest that naval power and naval warfare did not exist before that time. We simply don't know enough about these earlier mariners to discuss details with any assurance.

We do know, however, that Egypt was able to control the eastern Mediterranean in approximately 3000 B.C., and that Egyptian vessels traveled freely in that area. We know, too, that Egyptian expeditions traveled down the east coast of Africa to Punt (in the area known as Somaliland) and returned with most exotic cargoes that included ebony, myrrh, incense, ivory, gold, cosmetics, cattle, apes, dogs, monkeys, a panther and, of course, a handful of natives.

However, sea trade was for Egypt a luxury and a convenience. For the Minoans of the island of Crete,

it was a matter of life and, eventually, death. The Cretans seem to have achieved their greatest strength from about 1800 to 1500 B.C., when they exported to, and possibly maintained trading stations in Sicily, Greece, Rhodes, Cyprus and the Levant. It is believed, although no one is quite sure, that they also explored the great unknown area beyond Gibraltar—principally for tin for making bronze, as important to the great powers of that time as uranium is to us today.

We are not quite sure whether it was a great earthquake or a naval disaster about 1400 B.C., which brought an abrupt end to Crete's centuries of glory.

THEIR FOLLOWERS on the stage of naval history were the Phoenicians, a Semitic people living on a narrow strip of country between the mountains and seacoast along the eastern Mediterranean, and almost forced to earn their living by the sea. Primarily a commercial people, they explored the Mediterranean and beyond; they planted colonies for the sake of having trading posts on their routes (Carthage was one such); and they developed fighting ships for the protection of their trading monopolies.

Even in these early beginnings it is easy to see that sea-borne commerce led to the founding of colonies and the formation of an empire and that the preservation of such an empire depends on naval control of the sea. This was as true of Crete and Phoenicia as it was later true of Venice, Holland and England.

In the case of Phoenicia, a state with widespread colonies but little national solidarity or military strength, it was inevitable that the cities of the homeland should come finally under the domination of the great empires that rose on their eastern border, first, in the eighth century, B.C., under the Assyrians, and later under the Babylonians and Persians. Their grip on their colonies

was lost, and their commerce suffered some decline. But, with the Persians especially, the relationship of the Phoenicians was not so much that of a conquered people as of voluntary naval allies. They aided the Persians in a campaign against Egypt in the late sixth century B.C., and their navy helped Darius to subdue the revolt of the Greek cities in Asia Minor in 498 B.C., just before the great Graeco-Persian War.

ALTHOUGH WE ARE NOT too sure of the destinies of the nations mentioned above, scraps of information slowly accumulated by archeologists and others have given us a fair idea of what the ships and tactics of these early times were like.

Homer, in his story of the destruction of Troy, has considerable to say about the ships of the Greeks in the 12th century B.C.

It was their incomparable fleet that had led the Greeks to try an attack on Troy in the first place. Their fighting ships had no peer in the Mediterranean in that age. Homer is proud of these vessels and describes them with loving detail.

They had two types of galleys; One, 20-oared, and the other, 50-oared. The smaller size seems to have been about 40 feet long. Homer mentions that they were seven feet wide where the steersman sat in the stern-sheets, so they couldn't have been much more than nine or 10 feet amidships. They were so light that, when Odysseus was making his escape from the island of the Cyclops, he was able to get his vessel free of the shore with one good shove on the boat pole.

The 50-oared craft was simply longer, perhaps 90 feet instead of 40, and correspondingly of broader beam. Either size was ideal for sea raiding, low enough to lie hidden behind some promontory while stalking a prey, swift enough to dash out and overtake a clumsy merchantman handily, and light enough in draught to run, if chased, to the protection of the shore no matter how shallow the water.

HOMER CALLS THEM "hollow ships," that is, they were undecked almost throughout, like a dory. Since the slightest chop sent water over their low gunwales, a spray shield was generally rigged forward. There was a small deck there, too, for the lookout and for a few marines when the vessel engaged in combat, and there was a larger one aft for the helmsman and captain.

Since these ships offered no more in the way of com-

fort than a racing shell, the captain tried to beach his ship each night; if he had to sail through the night he himself could sleep on the afterdeck under a scrap of sailcloth, but the crew spent the long hours dozing on their benches. Gear and provisions were stowed under the decks and the rowing thwarts.

Whenever a Homeric skipper could, he sailed rather than rowed. As with the Vikings, he and his rowers were companions, and using the oars was only a part of their job; they were his fighting men as well. He neither could afford nor was in any position to use them up like the commander of a slave-driven galley of later days. His rowing chief beat only time—never the rowers.

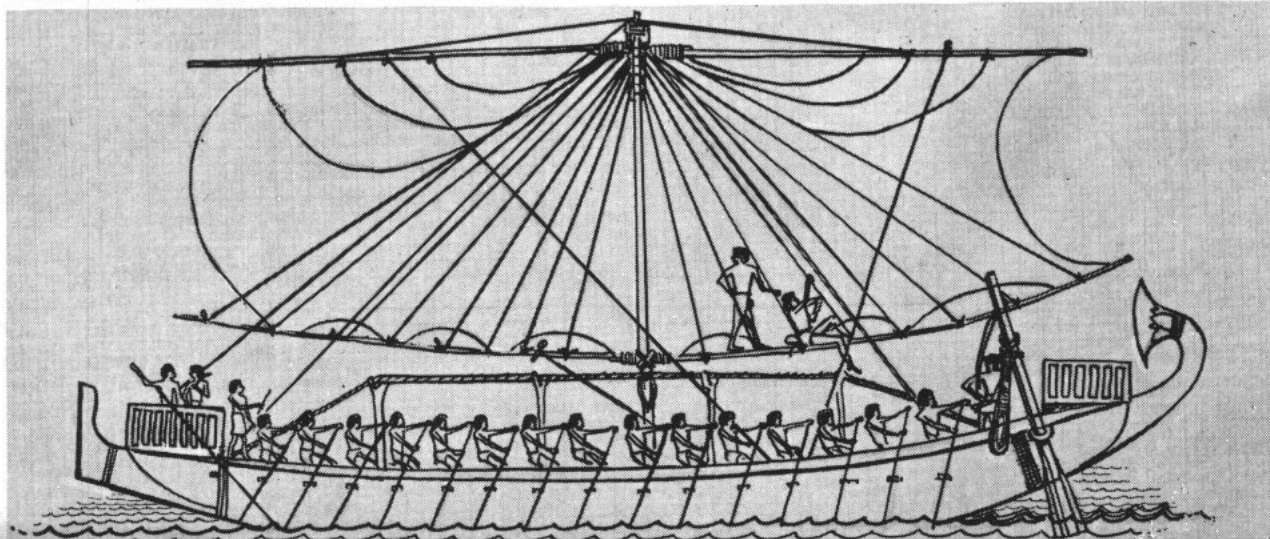
When the vessel was under oars, the mast was unstepped and lowered into a crutch aft, and the sailing gear was stowed under the bench.

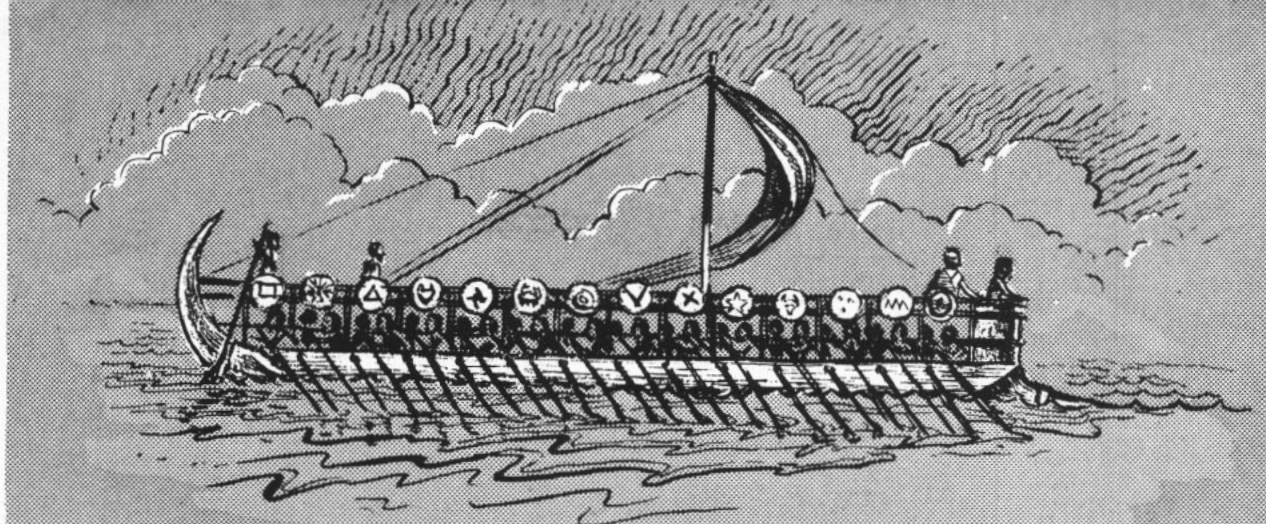
AS SOON AS a favorable wind came along, the crew made sail. First the mast was hauled up by two forestays, set in the mast-step, locked in with a wedge, and secured aft by a backstay. The one sail with its yard was hoisted and set by braces to catch the wind. The weather sheet was made fast, and the helmsman took his position with the leeward sheet in one hand and the tiller, a bar socketed into the steering oar, in the other. To shorten sail, the sailors used, instead of reef-points, brails which were lines run from the yard, looped about the foot of the sail and carried down to the deck. These rolled up the sail toward the yard just the way a venetian blind is raised. The sail was made of linen, not one piece but patches sewn together for added strength, and the lines of leather strips or of twisted papyrus fibers.

When there was no wind the crew took to the oars. They were broken out from below the benches and placed against tholes, wooden pins which were used instead of oarlocks. Each oar had a leather strap which was looped about the tholepin; in this way the oar was saved from going overboard if the rower lost his grip.

Whether under sail or oars, working these ships was strenuous, uncomfortable and dangerous. They were much less sturdy than the Viking ships, and the Greeks were correspondingly far less bold. When Nestor, for example, sailed home from Troy, his first leg was 15 miles to the island of Tenedos; his second an all-day run of 50 miles to Lesbos. Here he held a full scale conference of his captains to plot the next course. With great trepidation he elected to strike out straight across

SOME OF THE EARLIEST known records of ships come from Egypt. This type vessel made the voyage to Punt.





MAN-OF-WAR — The Persians used vessels of this type in their attack on the Greeks at the Battle of Salamis.

the open sea instead of island hopping, made it safely to the southern tip of Euboea—and, on landing, set up a great sacrifice to Zeus, “thanking him for crossing the vast stretch of sea,” all of 110 miles.

Usually ships stuck to the shore, sailing from one landfall to the next. When they had to travel at night they steered by the stars, but they avoided such voyages as much as possible. They much preferred to put in at evening, running the vessel smartly up a beach, or if there was none handy, dropping a stone anchor in some shallow, protected cove. This gave an opportunity to refill the water jars as well as to provide a night's sleep for all hands. In addition to these precautions, they limited their sailing to the time of year when the weather was most dependable, putting their boats in the water at the beginning of spring, around April, and hauling them out in October or so, when the fall set in. Almost all maritime activity, whether peaceful or warlike, was squeezed into the period between these months, and this remained more or less the case throughout ancient times.

VERY EARLY in Mediterranean seafaring, two vastly different types of ships had been developed. One was the clumsy, broad-beamed, heavily timbered “round ship,” or cargo vessel, dependent chiefly on sail propulsion. The other was the trim, narrow, sharp-lined “long ship,” built for speed and war. The latter had a length as much as eight times her beam, and was propelled primarily by oars. Sails, rigged on one or two masts, were used in cruising or flight before the wind, but not in battle, so that to “hoist sail” became a Greek idiom for running away.

Some time after Homer the Phoenicians, and almost certainly the Greeks, built their ships with two banks of rowers, one above the other, thus doubling the motive power. The name *bireme*, supposedly, was applied to these craft with double banks of oars. At the time of Salamis the typical man-of-war was the so-called *trireme*, but whether the name refers to three superimposed banks of oars, remains a disputed question even today.

The ordinary trireme was about 150 feet in length, 18 feet in beam, and from four to six feet in draft. The ship's company numbered about 200, of whom 170 were rowers. With these oarsmen, a trireme could maintain a cruising speed from seven to nine knots and increase it in emergencies to 12 to 15.

As in the earlier days, the ship was still drawn ashore by the stern and the crew cooked and slept on land when possible. Voyages still skirted the coast, and early history frequently mentions terrible disasters in which whole fleets were destroyed by storms.

MOST FIGHTING SHIPS had a ram at the bow. Some carried it at the waterline, but others mounted it well below. As the ships were light, with planking not more than two and one-half inches thick, only a moderate blow with the ram would be enough to penetrate the hull. However, it seems it was not common practice to attempt a headlong attack with the ram, for when once committed to the attack, a slight error of judgment or a minor change of course of the opponent might make all the difference between giving and receiving a fatal injury.

In practice, the two opponents would maneuver for position with caution while the archers, slingers and javelin men used their weapons. Later, as the ships came together, the spearmen and swordsmen would go to work.

Another weapon used as the situation permitted was the *dolphin*, a heavy weight slung at the yardarm and dropped upon the enemy to bilge him. A weight of 100 or 200 pounds dropped 30 feet would very likely go right through the bottom of the ship.

The ram could be used for two maneuvers—passage through the hostile line, or a turn around its flank. In the first (a plunge through center, so to speak), the objective was to injure the oars of the opponent or gain some advantage in the exchange of missiles and, having established some superiority in this way, the captain would make a quick turn about, then ram the enemy before he could swing into position.

The second maneuver was an envelopment, or turn around the opponent's flank, so as to attack him in the rear, or at least before he could turn himself to meet the attack bows on. It required either superior numbers or a great superiority in maneuvering to place ships on both sides of the hostile line, or on a part of it.

FROM WHAT WE CAN GATHER from these descriptions, it would appear that the ram could be as dangerous to its user as to its intended victim and, unless the attacker was definitely superior in his seamanship, he would do well to depend upon hand-to-hand fighting.

To protect the oars, the catheads were built very long



PATH TO DISASTER — The dotted line on this map shows route Xerxes took to the Battle of Salamis.

and heavy, and were heavily strutted from astern. Unless the enemy came close in passing, the oars, if depressed or trailed, would be within the line of the cathead, and if the enemy came close, the catheads themselves would sweep his sides and break his oars.

In general, fleets tried to approach each other for a hand-to-hand struggle and, at the same time, protect their oars. This protection was provided by a line formation in which each ship had a friend on each side and threatened the enemy with its own ram.

Thus, when the fleets drew together and began action, they were almost immobilized, and the battle fought out where the fleets first came in contact. The fighting men were armed after the fashion of soldiers of their own country, and the crews of opposing ships would try to find the position best suited to the style of hand-to-hand fighting evolved by their own men.

SUCH WAS THE STATE of ships and tactics when Persia decided the time was ripe for the final conquest of mainland Greece. This was not the first such attack, but Xerxes, king of Persia, the mightiest empire of that time, was determined that it would be the last.

When he gathered his forces for the final attack on the Greek city states in 480 B.C., it was the culmination of a struggle which had lasted for many years. Controlling most of Asia Minor as it did, Persia was of course immensely powerful. As viewed by contemporaries and by both sides of those involved, it must have appeared that Greece was to be merely another series

of minor cities to be absorbed by a superior power.

The first Persian expedition against the Peninsular Greeks in 492 B.C., was to have been a simple punitive expedition designed to subdue revolting tribesmen in Thrace and Macedonia. However, the supporting fleet which accompanied and supplied the army as it marched along the shores of the upper Aegean was severely damaged in a storm off Mt. Athos. With the protecting fleet out of action, the troops could not be supplied by the cargo vessels. Thus, the expeditionary force was compelled to retire—with considerable loss of face.

In 490 B.C., the Persians undertook an amphibious expedition directly across the Aegean, intending (so far as we know today) merely to establish a beachhead on the peninsula to build up their strength for a later attack.

In any event, after destroying a few minor cities along the coast, the force of 15,000 soldiers and 1500 horses were met by some 10,000 Athenians who drove them back into the sea at Marathon.

Now, Xerxes was determined that this should be the final effort. Estimates of his forces vary tremendously (from 180,000 to an incredible 1,700,000 infantry; from 770 to 1300 fighting ships, plus transports) but no matter what the numbers, they surpassed by far those of the Greeks.

As before, the army was to march by land, with cargo vessels supplying it from Asiatic bases.

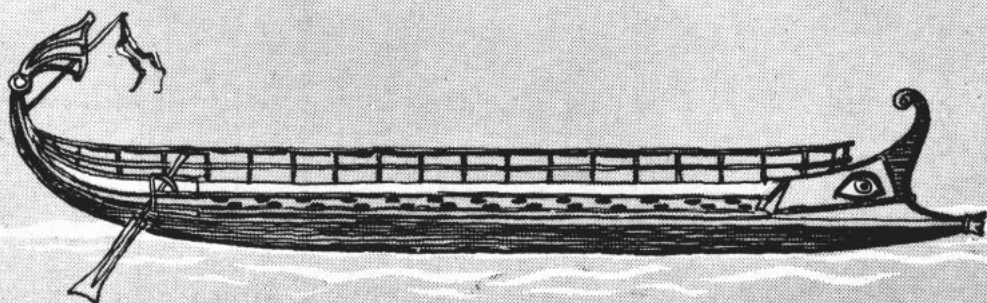
IN THE FACE of this peril the salvation of the Greeks was centered in the great Athenian leader Themistocles. It was he who first saw clearly that the secret of victory over the Persian hordes lay in naval superiority which could cut their lines of communication by sea.

Fearful as they were of the superior numbers of the approaching enemy fleet, and especially the traditional prowess of the Phoenicians in sea warfare, the Greek naval forces lying under the lee of Euboea were encouraged by the news of the loss of 200 Persian triremes, driven ashore during a severe northeast gale.

During the next three days, following the storm, the two fleets were drawn up only a short distance apart. Each day there was sharp but indecisive fighting, and a large squadron of Persian vessels which had been sent to block the southern exit of the channel inside Euboea was swept to disaster in a second storm.

At this time came tragic news from ashore, carried to the Greek fleet by a 30-oared messenger boat, of the attack at Thermopylae on Leonidas and the annihilation of his men. The attack opened the road to Athens.

GREEK SAILORS in ships like these fought to save ancient Greece from being conquered by the Persians.



Its first mission ended, the Greek fleet now retreated southward, taking its second stand at the strait within Salamis Island, just west of the port of Athens. The Persian fleet soon followed, keeping up with the advance on land, and assembled in the bay of Phalerum some eight miles east of Salamis.

On the approach of Xerxes' army, Athens was abandoned by the greater part of its citizens, and many of the refugees were taken to Salamis, where from the island heights they could still see the smoking citadel of their plundered city.

THE PERSIAN FLEET had been reduced by the disasters around Euboea to approximately 350 ships, or half of its original strength, but the Greeks had also suffered losses and now their ships numbered only about 300. The Persians had been occupied during the night watching the eastern exit, and at dawn both were forming their battle lines.

All the advantages of the defensive were with the Greeks, for they were fighting desperately for their homes and lives, in a steady formation awaiting attack, and in a narrow channel where the full strength of the enemy could not be used. Furthermore, a brisk morning wind from the west, which the Greeks had counted on, raised a choppy sea in the channel and hindered the enemy's approach. The Persian formation was also broken by a turn, and by the island of Psyttaleia, so that they entered the strait in two confused streams.

Since the strait in its narrower parts was little over a mile wide, there could hardly have been a hundred ships in either front line.

Advantage of position, rather than any marked superiority in seamanship or tactics, seems to have won the day, though in hand-to-hand fighting the heavier armor of the Greek hoplites was an important factor. The Greeks backed water at first to draw the enemy into the straits, and then drove their rams again and again into the confused Persian line. Amid wreckage and bodies of men swimming or drowning, the Persian ships fell backwards, crashing into those astern. Two ships were driven ashore near King Xerxes, who in wrath ordered the beheading of their officers and crew. On the island of Psyttaleia the Persian garrison was set upon by spearmen under Aristides, the rival of Themistocles in Athens, and slain to the last man.

About half the Persian fleet was sunk in the battle, and an indeterminate number captured. Their naval commander, Ariabignes, brother of the king, was slain. The Greeks lost 40 ships, and as many more were disabled.

Both fleets retired for the night, the Greeks waiting for a renewal of the action on the following day. But the decisive effect of Salamis was soon evident. On the third day scouts reported that the Persian fleet was in full retreat toward the Hellespont, and that, faced with starvation upon the rupture of their line of food supply from Asia, Xerxes and the bulk of his army were retreating by land. Under stress of famine, disease and guerilla warfare, it was only a broken and demoralized remnant of the great army that reached the Hellespont.

THE GREEK FLEET also cruised through the Aegean during the next summer after Salamis, and at Mycale on the Asia Minor coast destroyed the remainder of the Persian fleet, which had been deserted by the Phoeni-

cians and was drawn up on the beach with a stockade built around it. Here the last of Xerxes's armada went up in flames.

Athens, the leading naval power among the Greeks who fought at Salamis, was now supreme on the sea. In the Delian League formed a few years later, she assumed leadership over the island cities of the Aegean and many communities on the Asiatic shore, and soon made the confederacy merely an instrument for the extension of Athenian rule. Piraeus, the seaport of Athens, was fortified; the famous long walls were built to defend its connection with Athens, and it became a great naval base and center of trade. Hundreds of triremes were kept there, ready on short notice to put to sea with highly trained crews.

Beset by her land rival Sparta in the Peloponnesian Wars, Athens was long able to hold her own by supremacy of the sea.

It was only after the disastrous naval expedition to Sicily, 415-413 B.C., and the decisive naval defeat of Aegospotami in 405, cutting off her trade and grain supply from the Black Sea, that Athenian sea power fell into decay.

Philip of Macedonia later conquered Athens and southern Greece by land. Alexander, in his Asiatic campaigns, though menaced somewhat by the superior sea forces under Persian control, was able, in 332 B.C., to strike effectively at the chief seat of Persian naval strength when the Phoenician cities of Byblus, Sidon and Aradus surrendered and gave him the use of their ships in the famous siege and capture of Tyre. Other early naval actions will be discussed in future issues.

MAN OF THE HOUR — Greek warriors at the Battle of Salamis may have looked very much like this.



WITH THIS ISSUE, CDR Francis C. Huntley, USNR, winds up 10 years of dedicated, resourceful and imaginative editorial leadership of **ALL HANDS**. He has departed BuPers for new duties with the Naval History Division of the Office of the Chief of Naval Operations.

Ten years is a long time. It constitutes a large slice of the normal career. If, then, a man devotes 10 of his career years to a job, he couldn't help but hope to wind up with the satisfaction of knowing that his performance in that job has materially advanced the cause of the organization he represents. Under these criteria, CDR Huntley could well afford to be a most satisfied Navyman.

He has left an indelible personal imprint on the magazine which will long endure. And while it is true that few Navy men are afforded as long a period of time to evolve and nourish such an imprint (his years as editor were under the regimes of VADM James L. Holloway, VADM H. P. Smith, and the present Chief of Naval Personnel, VADM William R. Smedberg III), it is equally true that even fewer possess the varied background and range of talent CDR Huntley brought to this job.

One-time National Guardsman (sergeant type); World War II LST skipper, and, later, XO of the oiler *uss Manatee* (AO 58) for a couple of years during the Korean unpleasantness; writer; historian; former college professor; devoted guardian of the Queen's English; scrimshawer; photographer; ham radioman; chessmaster; one-time boxer; sports car and motorcycle enthusiast; marksman; Northeast United States Region thumbtack spinning champion, as well as acey-deucey fan—the list, as you can see, is well-nigh endless. We have barely scratched the surface here.

It is enough, however, to indicate that the commander knows a lot about a lot of things, and that he knows the Navy, both afloat and ashore. He has drawn on that knowledge extensively to help make **ALL HANDS** a better magazine for all hands.

CDR Huntley's tenure as editor of this publication has brought him recognition and commendation from many high sources, both in and out of the Navy. We wouldn't attempt to improve on that, but will content ourselves with observing that there isn't a member of the staff who wouldn't be happy to serve with him in any ship in the Navy.

To a long-time blue water sailor, we hope that will be praise enough.

★ ★ ★

Football has arrived at the South Pole! A delayed report from the southernmost point on the globe states that a rugged chilly battle was held at the "bottom of the world" on Thanksgiving Day. The Seabees of U.S. Naval Mobile Construction Battalion Eight defeated scientists of the United States Antarctic Research Program, 6-0.

A temperature of minus 33 degrees F., a bitter wind, and the rarefied atmosphere of the 10,000-foot polar plateau, made playing conditions somewhat less than ideal in comparison with traditional Turkey Day classics. Cheer up, the weather up in these parts lately is by no means tropical. In fact it's been colder in Florida than in parts of Alaska.

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keystones of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past. Never have our opportunities and our responsibilities been greater.

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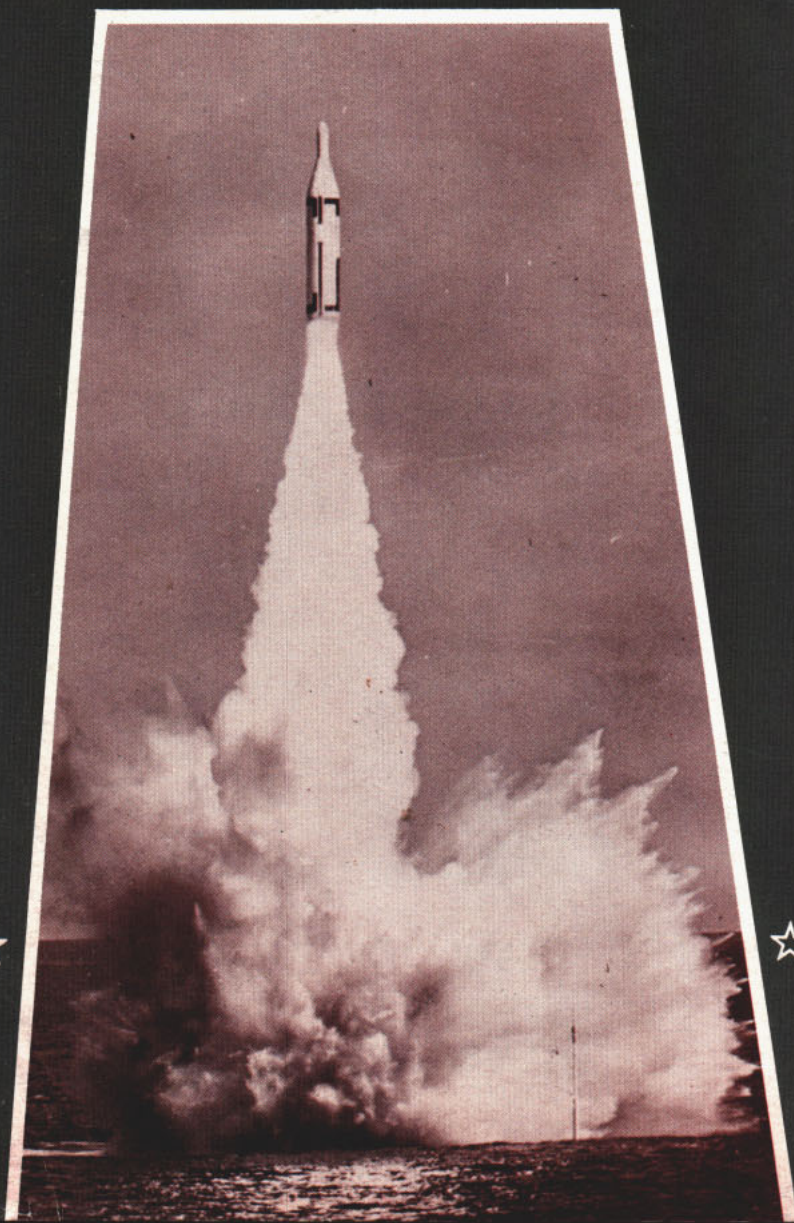
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• **AT RIGHT: HOME PORT** — On arrival at Mayport, Fla., J. J. Doyer, AK1, USN, stationed on board the carrier *USS Saratoga* (CVA 60), receives a warm greeting from his daughters.



POWER
helps preserve
the
PEACE



POLARIS

